

Appendix 1. Species distribution data

#	Order	Family	Genus	Species	Information Source	Specimen_#	Locality_#
1	Orthida	Plaesiomyidae	<i>Austinella</i>	<i>scovellei</i>	OSU	29526	
2	Orthida	Plaesiomyidae	<i>Austinella</i>	<i>scovellei</i>	OSU	22480	
3	Orthida	Plaesiomyidae	<i>Austinella</i>	<i>scovellei</i>	OSU	6516	
4	Atrypida	Anazygidae	<i>Catazyga</i>	<i>schuchertana</i>	MUGM	10670	
5	Atrypida	Anazygidae	<i>Catazyga</i>	<i>schuchertana</i>	MUGM	7618	
6	Atrypida	Anazygidae	<i>Catazyga</i>	<i>schuchertana</i>	CiMNH	21375	
7	Atrypida	Anazygidae	<i>Catazyga</i>	<i>schuchertana</i>	MUGM	15823	
8	Atrypida	Anazygidae	<i>Catazyga</i>	<i>schuchertana</i>	CiMNH	33520	
9	Atrypida	Anazygidae	<i>Catazyga</i>	<i>schuchertana</i>	CiMNH	18968	
10	Atrypida	Anazygidae	<i>Catazyga</i>	<i>schuchertana</i>	MUGM	14166	
11	Atrypida	Anazygidae	<i>Catazyga</i>	<i>schuchertana</i>	MUGM	26476	
12	Atrypida	Anazygidae	<i>Catazyga</i>	<i>schuchertana</i>	CiMNH		
13	Atrypida	Anazygidae	<i>Catazyga</i>	<i>schuchertana</i>	CiMNH	35735	
14	Orthida	Dalmanellidae	<i>Dalmanella</i>	<i>meeki</i>	MUGM	24279	BD3133
15	Orthida	Dalmanellidae	<i>Dalmanella</i>	<i>meeki</i>	MUGM	24303	2.16Q3
16	Orthida	Dalmanellidae	<i>Dalmanella</i>	<i>meeki</i>	MUGM	24281	1.33C
17	Orthida	Dalmanellidae	<i>Dalmanella</i>	<i>meeki</i>	Krumpolz, M.S., 1980		Unit 57
18	Orthida	Dalmanellidae	<i>Dalmanella</i>	<i>meeki</i>	Field		
19	Orthida	Dalmanellidae	<i>Dalmanella</i>	<i>meeki</i>	MUGM	24286	1.36B1
20	Orthida	Dalmanellidae	<i>Dalmanella</i>	<i>meeki</i>	Roy H. Reinhart, 1977		Stop 5
21	Orthida	Dalmanellidae	<i>Dalmanella</i>	<i>meeki</i>	MUGM	24282	1.33D1
22	Orthida	Dalmanellidae	<i>Dalmanella</i>	<i>meeki</i>	Holland and Patzkowsky 2007		72593
23	Orthida	Dalmanellidae	<i>Dalmanella</i>	<i>meeki</i>	CiMNH	21677	
24	Orthida	Dalmanellidae	<i>Dalmanella</i>	<i>meeki</i>	CiMNH	21676	
25	Orthida	Dalmanellidae	<i>Dalmanella</i>	<i>meeki</i>	CiMNH	21515	
26	Orthida	Dalmanellidae	<i>Dalmanella</i>	<i>meeki</i>	MUGM	6321	1.1L1
27	Orthida	Dalmanellidae	<i>Dalmanella</i>	<i>meeki</i>	Field		OH-WA-0002
28	Orthida	Dalmanellidae	<i>Dalmanella</i>	<i>meeki</i>	MUGM	24270	1.1L2
29	Orthida	Dalmanellidae	<i>Dalmanella</i>	<i>meeki</i>	MUGM	6322	1.18A2C
30	Orthida	Dalmanellidae	<i>Dalmanella</i>	<i>meeki</i>	MUGM	6324	3.26F2
31	Orthida	Dalmanellidae	<i>Dalmanella</i>	<i>meeki</i>	MUGM	6319	1.25C15
32	Orthida	Dalmanellidae	<i>Dalmanella</i>	<i>meeki</i>	MUGM	11463	
33	Orthida	Dalmanellidae	<i>Dalmanella</i>	<i>meeki</i>	MUGM	11458	
34	Orthida	Dalmanellidae	<i>Dalmanella</i>	<i>meeki</i>	CiMNH	34826	
35	Orthida	Dalmanellidae	<i>Dalmanella</i>	<i>meeki</i>	Holland and Patzkowsky 2007		72611
36	Orthida	Dalmanellidae	<i>Dalmanella</i>	<i>meeki</i>	CiMNH	23887	
37	Orthida	Dalmanellidae	<i>Dalmanella</i>	<i>meeki</i>	Holland and Patzkowsky 2007		72429
38	Orthida	Dalmanellidae	<i>Dalmanella</i>	<i>meeki</i>	Holland and Patzkowsky 2007		72469
39	Orthida	Dalmanellidae	<i>Dalmanella</i>	<i>meeki</i>	MUGM	24250	
40	Orthida	Dalmanellidae	<i>Dalmanella</i>	<i>meeki</i>	CiMNH	37285	
41	Orthida	Dalmanellidae	<i>Dalmanella</i>	<i>meeki</i>	MUGM	24288	1.34B17
42	Orthida	Dalmanellidae	<i>Dalmanella</i>	<i>meeki</i>	CiMNH	34833	
43	Orthida	Dalmanellidae	<i>Dalmanella</i>	<i>meeki</i>	MUGM	24302	2.9H
44	Orthida	Dalmanellidae	<i>Dalmanella</i>	<i>meeki</i>	Field		IN-FR-0001
45	Orthida	Dalmanellidae	<i>Dalmanella</i>	<i>meeki</i>	Field		IN-FR-0002
46	Orthida	Dalmanellidae	<i>Dalmanella</i>	<i>meeki</i>	MUGM	24293	1.53A3
47	Orthida	Dalmanellidae	<i>Dalmanella</i>	<i>meeki</i>	MUGM	24271	1.1II
48	Orthida	Dalmanellidae	<i>Dalmanella</i>	<i>meeki</i>	MUGM	24269	1.1I7A
49	Orthida	Dalmanellidae	<i>Dalmanella</i>	<i>meeki</i>	Field		OH-WA-0001
50	Orthida	Dalmanellidae	<i>Dalmanella</i>	<i>meeki</i>	MUGM	24249	BD3133
51	Orthida	Dalmanellidae	<i>Dalmanella</i>	<i>meeki</i>	CiMNH	5446	
52	Orthida	Dalmanellidae	<i>Dalmanella</i>	<i>meeki</i>	MUGM	24296	2.60E+07
53	Orthida	Dalmanellidae	<i>Dalmanella</i>	<i>meeki</i>	Field		IN-JE-0004
54	Orthida	Dalmanellidae	<i>Dalmanella</i>	<i>meeki</i>	Field		
55	Orthida	Dalmanellidae	<i>Dalmanella</i>	<i>meeki</i>	Field		
56	Orthida	Dalmanellidae	<i>Dalmanella</i>	<i>meeki</i>	MUGM	15975	BD3133

Appendix 1. Species distribution data

#	Group	Sequence	Formation	Zone	State	County	Town	Sequence	Latitude	Longitude
1	Richmondian	C5	Waynesville		OH	Butler		C5	39.428330	-84.646530
2	Richmondian	C5	Waynesville		OH	Warren	Oregonia	C5	39.450830	-84.096210
3	Richmondian	C5	Waynesville		OH	Warren	Waynesville	C5	39.528390	-84.119850
4	Richmondian	C5	Waynesville		OH	Adams	Manchester	C5	38.729330	-83.605450
5	Richmondian	C5	Waynesville		OH	Clinton	Clarksville	C5	39.401800	-83.980670
6	Richmondian	C5	Waynesville		OH	Butler	Hamilton	C5	39.399360	-84.561260
7	Richmondian	C5	Waynesville		IN	Dearborn	St. Leon	C5	39.276996	-84.952919
8	Richmondian	C5	Waynesville		IN	Jefferson	Madison	C5	38.735860	-85.379880
9	Richmondian	C5	Waynesville		OH	Warren	Oregonia	C5	39.450830	-84.096210
10	Richmondian	C5	Waynesville		OH	Adams	Manchester	C5	38.660151	-83.652374
11	Richmondian	C5	Waynesville		OH	Butler	Hamilton	C5	39.400300	-84.561680
12	Richmondian	C5	Waynesville	Blanchester	OH	Clermont	Blanchester	C5	39.238170	-84.022960
13	Richmondian	C5	Waynesville		OH	Warren	Waynesville	C5	39.528390	-84.119850
14	Maysvillian	C2	McMillan	Bellevue	OH	Butler	Darrtown	C2	39.495460	-84.711370
15	Maysvillian	C2	McMillan	Bellevue	IN	Jefferson	Madison	C2	38.744884	-85.423721
16	Maysvillian	C2	Fairview	Fairmount	OH	Butler	Mason	C2	39.301503	-84.409692
17	Maysvillian	C3	McMillan	Mt. Auburn	OH	Hamilton	Barnesburg	C3	39.2292	-84.62505
18	Maysvillian	C3	McMillan	Mt. Auburn	KY	Madison	Bybee	C3	37.709050	-84.314850
19	Maysvillian	C3	McMillan	Corryville	OH	Warren	Lebanon	C3	39.435260	-84.203670
20	Maysvillian	C3	McMillan	Corryville/Mt. Auburn	OH	Butler	Middletown	C3	39.5	-84.4167
21	Maysvillian	C3	McMillan	Corryville	OH	Butler	Westchester	C3	39.330250	-84.407341
22	Maysvillian	C3	Corryville		OH	Butler		C3	39.42507	-84.60073
23	Richmondian	C4	Arnheim		KY	Mason	Maysville	C4	38.619722	-83.758611
24	Richmondian	C4	Arnheim		KY	Mason	Maysville	C4	38.611111	-83.756389
25	Richmondian	C4	Arnheim		KY	Mason	Maysville	C4	38.598611	-83.765556
26	Richmondian	C4	Arnheim		OH	Butler		C4	39.499650	-84.718883
27	Richmondian	C4	Arnheim		OH	Warren		C4	39.484650	-84.063466
28	Richmondian	C4	Arnheim		OH	Butler		C4	39.529760	-84.740250
29	Richmondian	C4	Arnheim		OH	Butler	Reily	C4	39.432460	-84.765460
30	Richmondian	C4	Arnheim		KY	Nelson		C4	37.897733	-85.473350
31	Richmondian	C4	Arnheim		OH	Hamilton	Westwood	C4	39.158889	-84.651389
32	Richmondian	C4	Arnheim		OH	Warren	Oregonia	C4	39.451408	-84.096107
33	Richmondian	C4	Arnheim		OH	Butler	Oxford	C4	39.507271	-84.745682
34	Richmondian	C4	Oregonia		OH	Hamilton	Cincinnati	C4	39.137840	-84.605030
35	Richmondian	C4	Sunset		OH	Butler		C4	39.42507	-84.60073
36	Richmondian	C4	Oregonia		OH	Hamilton	Cincinnati	C4	39.198333	-84.577500
37	Richmondian	C4	Oregonia		IN	Franklin		C4	39.43694	-84.97806
38	Richmondian	C4	Oregonia		IN	Franklin		C4	39.3425	-84.95358
39	Richmondian	C5	Waynesville	Clarksville	IN	Jefferson	Madison	C5	38.744884	-85.423721
40	Richmondian	C5	Waynesville		OH	Butler	Oxford	C5	39.501944	-84.745000
41	Richmondian	C5	Waynesville	Clarksville	OH	Warren	Morrow	C5	39.014167	-84.131667
42	Richmondian	C5	Waynesville		IN	Dearborn	Weisburg	C5	39.217960	-85.045940
43	Richmondian	C5	Waynesville		IN	Ripley	Versailles	C5	39.080440	-85.249730
44	Richmondian	C5	Waynesville		IN	Franklin	Brookville	C5	39.437950	-84.987400
45	Richmondian	C5	Liberty		IN	Franklin		C5	39.484600	-84.064033
46	Richmondian	C5	Waynesville	Blanchester	OH	Adams	Seaman	C5	38.969167	-83.572222
47	Richmondian	C5	Waynesville		OH	Butler	Oxford	C5	39.496414	-84.747600
48	Richmondian	C5	Waynesville	Blanchester	OH	Butler		C5	39.503020	-84.759220
49	Richmondian	C5	Waynesville		OH	Warren		C5	39.477600	-84.063010
50	Richmondian	C5	Waynesville	Blanchester	OH	Butler	Oxford	C5	39.497820	-84.717430
51	Richmondian	C5	Waynesville		IN	Dearborn	Weisburg	C5	39.217960	-85.045940
52	Richmondian	C5	Waynesville		IN	Franklin	Oldenburg	C5	39.339649	-85.204193
53	Richmondian	C5	Waynesville		IN	Jefferson	Madison	C5	38.738833	-85.430317
54	Richmondian	C5	Liberty		KY	Boyle	Perryville	C5	37.661300	-85.159400
55	Richmondian	C5	Liberty		KY	Boyle		C5	37.661300	-85.159400
56	Richmondian	C5	Waynesville		IN	Franklin	Brookville	C5	39.437820	-85.005460

Appendix 1. Species distribution data

#	Location_info
1	Hanover RR cut
2	Oregonia
3	Waynesville
4	3mi N of Manchester on 0-136 left side of road
5	Catazyga Run along Harreysburg Pike 1mi by rd from Clarksville
6	Hamilton
7	hillside s. of I-74 about 1mi E of junct w/Rt 1 near St. Leon
8	Madison
9	Oregonia
10	Rt 136 roadcut, 3mi west of Manchester
11	two mile hill
12	Upper Stonelick Creek and Hunter's Creek, near Blanchester
13	Waynesville
14	4mi Ck
15	Clifty Ck, Madison
16	Gano RR. Cut-Mason, Oh
17	Base of section at the southeast end of outcrop, 1.4 m higher than the level of the first lightpost on the east side of Blue Rock Road just northwest of the exit ramp from Cross Country Highway.
18	Bybee
19	Ck SW of Shaker Village
20	Railroad cut on armco steel property in Oneida (permission required)
21	RR cut above westchester
22	Hillside exposure behind Wal-Mart at Ohio State Route 177 and Washington Boulevard, 0.3 miles southeast of intersection of Ohio State Routes 130 and 177
23	11.3 mi south
24	2 mi south
25	3 mi south
26	4 mile Creek
27	Caesar Creek Dam
28	Four Mile Ck
29	Indian Ck above Reily
30	Secton from Cox Ck up to Cox, Ky
31	Trib. Of W. Fork
32	
33	
34	Boudinot Ave.
35	Hillside exposure behind Wal-Mart at Ohio State Route 177 and Washington Boulevard, 0.3 miles southeast of intersection of Ohio State Routes 130 and 177
36	Mt. Airy
37	Roadcut at intersection of Indiana State Route 101 and Brookville Dam Road
38	Roadcut on Indiana State Route 1, 1.6 miles to 2.1 miles south of intersection with US Route 52 at Cedar Grove
39	.5mi W Clifty Ck, W of Madison, 2.3mi W of Rt107 int. 256,56,62
40	1/3 mi. South
41	2nd Ck
42	Big 4 RR cuts 14-15
43	Big slide bank on Cedar Creek
44	Bon Well Hill
45	Brookville Lake Causeway
46	Buck Run. N of Seaman
47	Bulls Run
48	Bulls Run (Collins Run)
49	Caesar Creek Spillway
50	Collins Run
51	Cut 14, Big Four R.R
52	Harpers Branch- N. Oldenburg
53	Madison-56
54	Perryville
55	Perryville -1
56	Rdcut E Brookville Lake Causeway East of Lake

Appendix 1. Species distribution data

57	Orthida	Dalmanellidae	<i>Dalmanella</i>	<i>meeki</i>	MUGM	10574	BD3133
58	Orthida	Dalmanellidae	<i>Dalmanella</i>	<i>meeki</i>	Field		
59	Orthida	Dalmanellidae	<i>Dalmanella</i>	<i>meeki</i>	MUGM	24290	1.43J2
60	Orthida	Dalmanellidae	<i>Dalmanella</i>	<i>meeki</i>	Field		IN-FR-0005
61	Orthida	Dalmanellidae	<i>Dalmanella</i>	<i>meeki</i>	Field		IN-FR-0005
62	Orthida	Dalmanellidae	<i>Dalmanella</i>	<i>meeki</i>	MUGM	11466	
63	Orthida	Dalmanellidae	<i>Dalmanella</i>	<i>meeki</i>	MUGM	24277	1.16H
64	Orthida	Dalmanellidae	<i>Dalmanella</i>	<i>meeki</i>	CiMNH	28327	
65	Orthida	Dalmanellidae	<i>Dalmanella</i>	<i>meeki</i>	CiMNH	144A	
66	Orthida	Dalmanellidae	<i>Dalmanella</i>	<i>meeki</i>	CiMNH	34832	
67	Orthida	Dalmanellidae	<i>Dalmanella</i>	<i>meeki</i>	CiMNH	34876	
68	Orthida	Dalmanellidae	<i>Dalmanella</i>	<i>meeki</i>	MUGM	11456	
69	Orthida	Dalmanellidae	<i>Dalmanella</i>	<i>meeki</i>	CiMNH	27681	
70	Orthida	Dalmanellidae	<i>Dalmanella</i>	<i>meeki</i>	CiMNH	28276	
71	Orthida	Dalmanellidae	<i>Dalmanella</i>	<i>meeki</i>	CiMNH	21496	
72	Orthida	Dalmanellidae	<i>Dalmanella</i>	<i>meeki</i>	CiMNH	OL97.20.22	
73	Orthida	Dalmanellidae	<i>Dalmanella</i>	<i>meeki</i>	CiMNH	1648	
74	Orthida	Dalmanellidae	<i>Dalmanella</i>	<i>meeki</i>	CiMNH		
75	Orthida	Dalmanellidae	<i>Dalmanella</i>	<i>meeki</i>	MUGM	24272	1.13B17
76	Orthida	Dalmanellidae	<i>Dalmanella</i>	<i>meeki</i>	Holland and Patzkowsky 2007		72546
77	Orthida	Dalmanellidae	<i>Dalmanella</i>	<i>meeki</i>	Holland and Patzkowsky 2007		72932
78	Orthida	Dalmanellidae	<i>Dalmanella</i>	<i>meeki</i>	Holland and Patzkowsky 2007		72937
79	Orthida	Dalmanellidae	<i>Dalmanella</i>	<i>meeki</i>	Holland and Patzkowsky 2007		72541
80	Orthida	Dalmanellidae	<i>Dalmanella</i>	<i>meeki</i>	Holland and Patzkowsky 2007		72804
81	Orthida	Dalmanellidae	<i>Dalmanella</i>	<i>meeki</i>	Holland and Patzkowsky 2007		73035
82	Orthida	Dalmanellidae	<i>Dalmanella</i>	<i>meeki</i>	Holland and Patzkowsky 2007		72431
83	Orthida	Dalmanellidae	<i>Dalmanella</i>	<i>meeki</i>	Holland and Patzkowsky 2007		72472
84	Orthida	Dalmanellidae	<i>Dalmanella</i>	<i>meeki</i>	Holland and Patzkowsky 2007		72626
85	Orthida	Dalmanellidae	<i>Dalmanella</i>	<i>meeki</i>	Holland and Patzkowsky 2007		73065
86	Orthida	Dalmanellidae	<i>Dalmanella</i>	<i>meeki</i>	MUGM	24299	2.9A1
87	Orthida	Dalmanellidae	<i>Dalmanella</i>	<i>multisecta</i>	Holland and Patzkowsky 2007		72757
88	Orthida	Dalmanellidae	<i>Dalmanella</i>	<i>multisecta</i>	Holland and Patzkowsky 2007		72717
89	Orthida	Dalmanellidae	<i>Dalmanella</i>	<i>multisecta</i>	Holland and Patzkowsky 2007		72736
90	Orthida	Dalmanellidae	<i>Dalmanella</i>	<i>multisecta</i>	Holland and Patzkowsky 2007		72649
91	Orthida	Dalmanellidae	<i>Dalmanella</i>	<i>multisecta</i>	Holland and Patzkowsky 2007		73023
92	Orthida	Dalmanellidae	<i>Dalmanella</i>	<i>multisecta</i>	Holland and Patzkowsky 2007		72738
93	Orthida	Dalmanellidae	<i>Dalmanella</i>	<i>multisecta</i>	Holland and Patzkowsky 2007		72674
94	Orthida	Dalmanellidae	<i>Dalmanella</i>	<i>multisecta</i>	Holland and Patzkowsky 2007		72695
95	Orthida	Dalmanellidae	<i>Dalmanella</i>	<i>multisecta</i>	CiMNH	28121	
96	Orthida	Dalmanellidae	<i>Dalmanella</i>	<i>multisecta</i>	Field		IN-JE-0003
97	Orthida	Dalmanellidae	<i>Dalmanella</i>	<i>multisecta</i>	Holland and Patzkowsky 2007		72661
98	Orthida	Dalmanellidae	<i>Dalmanella</i>	<i>multisecta</i>	Holland and Patzkowsky 2007		73070
99	Strophomenida	Sowerbyellidae	<i>Thaerodonta</i>	<i>clarksvillensis</i>	MUGM	7110	BD3304
100	Strophomenida	Sowerbyellidae	<i>Thaerodonta</i>	<i>clarksvillensis</i>	Field		IN-FR-0002
101	Strophomenida	Sowerbyellidae	<i>Thaerodonta</i>	<i>clarksvillensis</i>	MUGM	24552	BD3304
102	Strophomenida	Sowerbyellidae	<i>Thaerodonta</i>	<i>clarksvillensis</i>	Field		OH-WA-0001
103	Strophomenida	Sowerbyellidae	<i>Thaerodonta</i>	<i>clarksvillensis</i>	MUGM	24561	1.3A1
104	Strophomenida	Sowerbyellidae	<i>Thaerodonta</i>	<i>clarksvillensis</i>	MUGM	24549	
105	Strophomenida	Sowerbyellidae	<i>Thaerodonta</i>	<i>clarksvillensis</i>	MUGM	24578	2.60E+10
106	Strophomenida	Sowerbyellidae	<i>Thaerodonta</i>	<i>clarksvillensis</i>	CiMNH	23885	
107	Strophomenida	Sowerbyellidae	<i>Thaerodonta</i>	<i>clarksvillensis</i>	MUGM	29309	BD3304
108	Strophomenida	Sowerbyellidae	<i>Thaerodonta</i>	<i>clarksvillensis</i>	Field		IN-FR-0005
109	Strophomenida	Sowerbyellidae	<i>Thaerodonta</i>	<i>clarksvillensis</i>	MUGM	10559	BD3304
110	Strophomenida	Sowerbyellidae	<i>Thaerodonta</i>	<i>clarksvillensis</i>	CiMNH	20586	
111	Strophomenida	Sowerbyellidae	<i>Thaerodonta</i>	<i>clarksvillensis</i>	MUGM	24558	1.1V3
112	Strophomenida	Sowerbyellidae	<i>Thaerodonta</i>	<i>clarksvillensis</i>	MUGM	24570	1.54C3
113	Strophomenida	Sowerbyellidae	<i>Thaerodonta</i>	<i>clarksvillensis</i>	MUGM	24563	1.16H

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57	Richmondian	C5	Waynesville	Blanchester	IN	Franklin	Brookville	C5	39.479617	-84.947888
58	Richmondian	C5	Liberty		IN	Wayne	Richmond	C5	37.748466	-84.297716
59	Richmondian	C5	Waynesville	Clarksville	OH	Sewell	Clarksville	C5	39.411944	-83.989444
60	Richmondian	C5	Liberty		IN	Franklin	Brookville	C5	39.341966	-84.953650
61	Richmondian	C5	Liberty		IN	Franklin	Brookville	C5	39.341966	-84.953650
62	Richmondian	C5	Liberty		OH	Butler	Oxford	C5	39.499650	-84.718883
63	Richmondian	C5	Waynesville		OH	Butler	Hamilton	C5	39.400300	-84.561680
64	Richmondian	C5	Waynesville		OH	Clinton	Blanchester	C5	39.238170	-84.022960
65	Richmondian	C5	Waynesville	Blanchester	OH	Clinton	Blanchester	C5	39.238170	-84.022960
66	Richmondian	C5	Waynesville		OH	Clinton	Blanchester	C5	39.238170	-84.022960
67	Richmondian	C5	Waynesville		OH	Brown	Russellville	C5	38.866390	-83.786800
68	Richmondian	C5	Waynesville		IN	Dearborn	Bonnell	C5	39.167640	-84.973990
69	Richmondian	C5	Waynesville		IN	Dearborn	Weisburg	C5	39.217960	-85.045940
70	Richmondian	C5	Waynesville		OH	Clinton	Blanchester	C5	39.238170	-83.989030
71	Richmondian	C5	Waynesville		IN	Franklin	Oldenburg	C5	39.339700	-85.204320
72	Richmondian	C5	Waynesville	Clarksville	OH	Clinton	Clarksville	C5	39.401380	-83.981350
73	Richmondian	C5	Waynesville		OH	Warren	Lebanon	C5	39.435220	-84.202900
74	Richmondian	C5	Waynesville	Clarksville	OH	Butler	Oxford	C5	39.506870	-84.745100
75	Richmondian	C5	Waynesville		OH	Butler	Middletown	C5	39.514751	-84.398140
76	Richmondian	C5	Waynesville		OH	Warren		C5	39.48027	-84.5712
77	Richmondian	C5	Waynesville		OH	Butler		C5	39.35915	-84.36065
78	Richmondian	C5	Waynesville		IN	Franklin		C5	39.43858	-85.0052
79	Richmondian	C5	Waynesville		OH	Warren		C5	39.48456	-84.6351
80	Richmondian	C5	Waynesville	Clarksville	OH	Warren		C5	39.48127	-84.6817
81	Richmondian	C5	Waynesville	Fort Ancient	OH	Warren		C5	39.32828	-84.6783
82	Richmondian	C5	Waynesville		IN	Franklin		C5	39.43694	-84.97806
83	Richmondian	C5	Waynesville	Fort Ancient	IN	Franklin		C5	39.3425	-84.95358
84	Richmondian	C5	Waynesville		OH	Warren		C5	39.54853	-84.05233
85	Richmondian	C5	Bull Fork		KY	Fleming		C5	38.40108	-83.72325
86	Richmondian	C6	Elkhorn		IN	Ripley	Versailles	C6	39.081030	-85.251026
87	Edenian	C1	Kope		KY	Kenton		C1	39.00833	-84.52972
88	Edenian	C1	Kope		OH	Campbell		C1	39.05612	-84.43612
89	Edenian	C1	Kope		KY	Kenton		C1	39.0297	-84.54167
90	Maysvillian	C1	Fairview		OH	Campbell		C1	39.0059	-84.4501
91	Edenian	C1	Kope		KY	Mason		C1	38.68263	-83.79007
92	Maysvillian	C1	Clays Ferry		KY	Washington		C1	37.64983	-85.07308
93	Edenian	C1	Kope	Fulton	OH	Campbell		C1	39.0333	-84.4167
94	Maysvillian	C1	Clays Ferry		KY	Marion		C1	37.58577	-85.07163
95	Maysvillian	C2	Fairview	Mt. Hope	OH	Hamilton	Cincinnati	C2	39.121667	-84.547500
96	Maysvillian	C2	McMillan	Bellevue	IN	Jefferson	Madison	C2	38.749233	-85.376783
97	Maysvillian	C2	Fairview		OH	Campbell		C2	39.0059	-84.4501
98	Maysvillian	C2	Fairview		KY	Mason		C2	38.68263	-83.79007
99	Richmondian	C5	Waynesville	Clarksville	OH	Butler	Monroe	C5	39.408080	-84.359940
100	Richmondian	C5	Liberty		IN	Franklin		C5	39.484600	-84.064033
101	Richmondian	C5	Waynesville		OH	Butler		C5	39.503020	-84.759220
102	Richmondian	C5	Waynesville		OH	Warren		C5	39.477600	-84.063010
103	Richmondian	C5	Liberty		OH	Preble		C5	39.627020	-84.664720
104	Richmondian	C5	Liberty		OH	Butler	Oxford	C5	39.506920	-84.745150
105	Richmondian	C5	Liberty		IN	Dearborn	Weisburg	C5	39.217960	-85.045940
106	Richmondian	C5	Waynesville		OH	Warren	Waynesville	C5	39.528390	-84.119850
107	Richmondian	C5	Waynesville		OH	Warren	Waynesville	C5	39.538670	-84.069220
108	Richmondian	C5	Liberty		IN	Franklin	Brookville	C5	39.341966	-84.953650
109	Richmondian	C5	Waynesville		OH	Butler	Oxford	C5	39.556810	-84.735040
110	Richmondian	C5	Waynesville		OH	Clinton	Clarksville	C5	39.406140	-83.987000
111	Richmondian	C5	Liberty		OH	Butler	Oxford	C5	39.499650	-84.718883
112	Richmondian	C5	Whitewater		OH	Adams	Seaman	C5	38.919444	-83.579722
113	Richmondian	C5	Waynesville		OH	Butler	Hamilton	C5	39.400300	-84.561680

Appendix 1. Species distribution data

57	Rdcut on Rt101 4mi N Brookville between Liberty and Brookville
58	Richmond
59	Sewell Run
60	South Gate Hill
61	South Gate Hill
62	Talawanda Creek
63	Two Mile Hill
64	U. Stonelick & Hunter Creeks
65	Upper Stonelick
66	Upper Stonelick Creek & Hunters Creek
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76	Exposures along walls and floor of emergency spillway for Caesar Creek Lake
77	Hillside exposure along pond on north side of development at northeast corner of intersection of Tylersville and Cox Roads in Westchester
78	Hillside exposure flanking emergency spillway adjacent to dam of Brookville Lake
79	Hillside exposure on north side of dam outlet from Caesar Creek Lake
80	Multiple streamside exposures along unnamed stream that flows west of end of emergency spillway for Caesar Creek Lake and northward into Caesar Creek
81	Multiple streamside exposures on Lick Run upstream and downstream of bridge for Ohio State Route 132
82	Roadcut at intersection of Indiana State Route 101 and Brookville Dam Road
83	Roadcut on Indiana State Route 1, 1.6 miles to 2.1 miles south of intersection with US Route 52 at Cedar Grove
84	Roadcut on west side of US Route 42, 1.2 miles north of Main Street in Waynesville
85	Three roadcuts on both sides Kentucky State Route 32, beginning 0.6 miles southeast of the intersection of with Kentucky State Route 11 on the south side of Flemingsburg and continuing for 0.6 miles to the southeast.
86	Cedar Ck
87	Hillside exposure behind White Castle food processing plant on Kentucky State Route 17, 1.0 miles south of I-275 overpass
88	Roadcut on both sides of Kentucky State Route 445, 0.2 miles west of intersection with Kentucky State Route 8
89	Roadcut on north side of Kentucky State Route 371 (Orphanage Road), 0.6 miles west of intersection with Kentucky State Route 17
90	Roadcut on northeast side of AA highway (Kentucky State Route 9), 1.4 miles west of US Route 27 overpass
91	Roadcuts on both sides of new US Route 62 and 68, east of Maysville and beginning 0.3 miles south of bridge over Ohio River
92	Series of roadcuts primarily on north side of US Route 150, beginning at 0.6 miles west of intersection with old US Route 150 and continuing east for 0.4 miles
93	Stream exposures along Duck Creek, immediately southwest of Kentucky State Route 1998 (Industrial Road), 0.3 miles south of intersection with Kentucky State Route 8
94	Two roadcuts on both sides of US Route 68, 0.4 and 0.9 miles west of intersection with Kentucky State Route 243
95	Bald Knob cut
96	Madison-421S
97	Roadcut on northeast side of AA highway (Kentucky State Route 9), 1.4 miles west of US Route 27 overpass
98	Roadcuts on both sides of new US Route 62 and 68, east of Maysville and beginning 0.3 miles south of bridge over Ohio River
99	4mi S of Monroe, W. Bank
100	Brookville Lake Causeway
101	Bulls Run
102	Caesar Creek Spillway
103	Devil's Backbone
104	Dodges Ck
105	Harpers Branch, Flowing North
106	Newman's Run
107	Rdcut R42, 2mi NE waynesville
108	South Gate Hill
109	Spillway of Acton Dam, N. of Oxford
110	Stony Creek (Hollow)
111	Talawanda Creek at County Line
112	Trib. Of Grace Run from Seaman
113	Two Mile Hill

Appendix 1. Species distribution data

114	Strophomenida	Sowerbyellidae	<i>Thaerodonta</i>	<i>clarksvillensis</i>	MUGM	11445	BD3304
115	Strophomenida	Sowerbyellidae	<i>Thaerodonta</i>	<i>clarksvillensis</i>	MUGM	11448	
116	Strophomenida	Sowerbyellidae	<i>Thaerodonta</i>	<i>clarksvillensis</i>	CiMNH	23946	
117	Strophomenida	Sowerbyellidae	<i>Thaerodonta</i>	<i>clarksvillensis</i>	MUGM	11441	BD3304
118	Strophomenida	Sowerbyellidae	<i>Thaerodonta</i>	<i>clarksvillensis</i>	MUGM	11442	BD3304
119	Strophomenida	Sowerbyellidae	<i>Thaerodonta</i>	<i>clarksvillensis</i>	Holland and Patzkowsky 2007		72562
120	Strophomenida	Sowerbyellidae	<i>Thaerodonta</i>	<i>clarksvillensis</i>	Holland and Patzkowsky 2007		72881
121	Strophomenida	Sowerbyellidae	<i>Thaerodonta</i>	<i>clarksvillensis</i>	Holland and Patzkowsky 2007		73098
122	Strophomenida	Sowerbyellidae	<i>Thaerodonta</i>	<i>clarksvillensis</i>	Holland and Patzkowsky 2007		72502
123	Strophomenida	Sowerbyellidae	<i>Thaerodonta</i>	<i>clarksvillensis</i>	Holland and Patzkowsky 2007		72618
124	Strophomenida	Sowerbyellidae	<i>Thaerodonta</i>	<i>clarksvillensis</i>	Holland and Patzkowsky 2007		73112
125	Strophomenida	Sowerbyellidae	<i>Thaerodonta</i>	<i>clarksvillensis</i>	Holland and Patzkowsky 2007		72878
126	Strophomenida	Sowerbyellidae	<i>Thaerodonta</i>	<i>clarksvillensis</i>	CiMNH		
127	Strophomenida	Sowerbyellidae	<i>Thaerodonta</i>	<i>clarksvillensis</i>	MUGM	24577	2.6G7
128	Orthida	Glyptorthidae	<i>Glyptorthis</i>	<i>insculpta</i>	OSU	5058	
129	Orthida	Glyptorthidae	<i>Glyptorthis</i>	<i>insculpta</i>	OSU	22452	
130	Orthida	Glyptorthidae	<i>Glyptorthis</i>	<i>insculpta</i>	OSU	22923	BD3128
131	Orthida	Glyptorthidae	<i>Glyptorthis</i>	<i>insculpta</i>	OSU	22461	BD3126
132	Orthida	Glyptorthidae	<i>Glyptorthis</i>	<i>insculpta</i>	CiMNH	6184	
133	Orthida	Glyptorthidae	<i>Glyptorthis</i>	<i>insculpta</i>	OSU	15982	
134	Orthida	Glyptorthidae	<i>Glyptorthis</i>	<i>insculpta</i>	OSU	22453	BD2126
135	Orthida	Glyptorthidae	<i>Glyptorthis</i>	<i>insculpta</i>	OSU	15885	BD 3126
136	Orthida	Glyptorthidae	<i>Glyptorthis</i>	<i>insculpta</i>	OSU	22462	BD3126
137	Orthida	Glyptorthidae	<i>Glyptorthis</i>	<i>insculpta</i>	CiMNH	21303	
138	Orthida	Glyptorthidae	<i>Glyptorthis</i>	<i>insculpta</i>	OSU	14598	BD3126 1.16I
139	Orthida	Glyptorthidae	<i>Glyptorthis</i>	<i>insculpta</i>	OSU	22440	BD3126
140	Orthida	Glyptorthidae	<i>Glyptorthis</i>	<i>insculpta</i>	OSU	22451	
141	Orthida	Glyptorthidae	<i>Glyptorthis</i>	<i>insculpta</i>	OSU	22458	
142	Orthida	Glyptorthidae	<i>Glyptorthis</i>	<i>insculpta</i>	OSU	11611	BD3126
143	Orthida	Glyptorthidae	<i>Glyptorthis</i>	<i>insculpta</i>	OSU	29560	
144	Orthida	Glyptorthidae	<i>Glyptorthis</i>	<i>insculpta</i>	CiMNH	15534	
145	Orthida	Glyptorthidae	<i>Glyptorthis</i>	<i>insculpta</i>	CiMNH	2120	
146	Orthida	Glyptorthidae	<i>Glyptorthis</i>	<i>insculpta</i>	CiMNH	35786	
147	Orthida	Glyptorthidae	<i>Glyptorthis</i>	<i>insculpta</i>	CiMNH	21705	
148	Orthida	Glyptorthidae	<i>Glyptorthis</i>	<i>insculpta</i>	Field		
149	Orthida	Glyptorthidae	<i>Glyptorthis</i>	<i>insculpta</i>	OSU	15767	BD3126
150	Orthida	Glyptorthidae	<i>Glyptorthis</i>	<i>insculpta</i>	OSU	22449	
151	Orthida	Glyptorthidae	<i>Glyptorthis</i>	<i>insculpta</i>	OSU	22448	BD3126
152	Orthida	Glyptorthidae	<i>Glyptorthis</i>	<i>insculpta</i>	CiMNH	21719	
153	Orthida	Glyptorthidae	<i>Glyptorthis</i>	<i>insculpta</i>	Holland and Patzkowsky 2007		72553
154	Orthida	Glyptorthidae	<i>Glyptorthis</i>	<i>insculpta</i>	Holland and Patzkowsky 2007		72882
155	Orthida	Glyptorthidae	<i>Glyptorthis</i>	<i>insculpta</i>	Holland and Patzkowsky 2007		72502
156	Orthida	Glyptorthidae	<i>Glyptorthis</i>	<i>insculpta</i>	Holland and Patzkowsky 2007		72619
157	Orthida	Glyptorthidae	<i>Glyptorthis</i>	<i>insculpta</i>	OSU	22922	BD 3128 1.43L2
158	Orthida	Glyptorthidae	<i>Glyptorthis</i>	<i>insculpta</i>	CiMNH	21716	
159	Orthida	Glyptorthidae	<i>Glyptorthis</i>	<i>insculpta</i>	CiMNH	35738	
160	Orthida	Glyptorthidae	<i>Glyptorthis</i>	<i>insculpta</i>	MUGM	22452	
161	Orthida	Glyptorthidae	<i>Glyptorthis</i>	<i>insculpta</i>	MUGM	22461	
162	Orthida	Glyptorthidae	<i>Glyptorthis</i>	<i>insculpta</i>	Field		IN-FR-0001
163	Orthida	Glyptorthidae	<i>Glyptorthis</i>	<i>insculpta</i>	MUGM	15982	
164	Orthida	Glyptorthidae	<i>Glyptorthis</i>	<i>insculpta</i>	MUGM	22453	1.1I8
165	Orthida	Glyptorthidae	<i>Glyptorthis</i>	<i>insculpta</i>	MUGM	22462	
166	Orthida	Glyptorthidae	<i>Glyptorthis</i>	<i>insculpta</i>	MUGM	22451	1.13H13
167	Orthida	Glyptorthidae	<i>Glyptorthis</i>	<i>insculpta</i>	Field		OH-WA-0003
168	Orthida	Glyptorthidae	<i>Glyptorthis</i>	<i>insculpta</i>	Field		IN-FR-0003
169	Orthida	Glyptorthidae	<i>Glyptorthis</i>	<i>insculpta</i>	CiMNH	OL93.20.25	
170	Orthida	Glyptorthidae	<i>Glyptorthis</i>	<i>insculpta</i>	MUGM	29560	

Appendix 1. Species distribution data

114	Richmondian	C5	Waynesville		IN	Ripley	Versailles	C5	39.072231	-85.252373
115	Richmondian	C5	Liberty		IN	Dearborn	Weisburg	C5	39.215931	-85.045151
116	Richmondian	C5	Whitewater		IN	Dearborn	Weisburg	C5	39.217960	-85.045940
117	Richmondian	C5	Waynesville		OH	Clinton	Clarksville	C5	39.387960	-83.924820
118	Richmondian	C5	Waynesville		OH	Warren	Oregonia	C5	39.451408	-84.096107
119	Richmondian	C5	Liberty		OH	Warren		C5	39.48027	-84.5712
120	Richmondian	C5	Waynesville		OH	Warren		C5	39.47997	-84.04893
121	Richmondian	C5	Liberty		IN	Jefferson		C5	38.77827	-85.36523
122	Richmondian	C5	Waynesville	Blanchester	IN	Franklin		C5	39.3425	-84.95358
123	Richmondian	C5	Waynesville		OH	Warren		C5	39.54853	-84.05233
124	Richmondian	C5	Bull Fork		KY	Mason		C5	38.59637	-83.71927
125	Richmondian	C5	Waynesville		OH	Warren		C5	39.48693	-84.6558
126	Richmondian	C6	Whitewater	Upper Whitewater	IN	Ripley	Versailles	C6	39.080440	-85.249730
127	Richmondian	C6	Elkhorn		IN	Franklin	Hamburg	C6	39.380700	-85.250890
128	Richmondian	C5	Waynesville	Blanchester	OH	Preble	Camden	C5	39.636410	-84.641620
129	Richmondian	C5	Waynesville		IN	Ripley	Versailles	C5	39.080440	-85.249730
130	Richmondian	C5	Waynesville		OH	Warren		C5	39.421667	-84.098333
131	Richmondian	C5	Waynesville	Blanchester	OH	Warren	Oregonia	C5	39.451040	-84.088090
132	Richmondian	C5	Waynesville		OH	Clinton	Blanchester	C5	39.293110	-83.988880
133	Richmondian	C5	Liberty		IN	Franklin	Brookville	C5	39.457640	-85.006200
134	Richmondian	C5	Liberty	Liberty	OH	Butler	Oxford	C5	39.506870	-84.745100
135	Richmondian	C5	Waynesville		OH	Warren		C5	39.477600	-84.063010
136	Richmondian	C5	Whitewater		OH	Clinton	Clarksville	C5	39.392250	-83.924900
137	Richmondian	C5	Waynesville	Blanchester	IN	Dearborn	Weisburg	C5	39.217960	-85.045940
138	Richmondian	C5	Whitewater		OH	Preble	Camden	C5	39.627020	-84.664720
139	Richmondian	C5	Liberty		OH	Butler		C5	39.506920	-84.745150
140	Richmondian	C5	Waynesville	Blanchester	OH	Butler	Miltonville	C5	39.527220	-84.468060
141	Richmondian	C5	Waynesville		IN	Ripley		C5	39.085200	-85.230960
142	Richmondian	C5	Liberty		OH	Brown	Fayetteville	C5	39.186740	-83.932040
143	Richmondian	C5	Liberty		IN	Dearborn	Weisburg	C5	39.217960	-85.045940
144	Richmondian	C5	Waynesville	Blanchester	OH	Clinton	Blanchester	C5	39.238170	-84.022960
145	Richmondian	C5	Whitewater		OH	Warren	Lebanon	C5	39.435220	-84.202900
146	Richmondian	C5	Waynesville		IN	Jefferson	Madison	C5	38.735860	-85.379880
147	Richmondian	C5	Whitewater		OH	Warren	Oregonia	C5	39.450830	-84.096210
148	Richmondian	C5	Liberty		KY	Boyle		C5	37.661300	-85.159400
149	Richmondian	C5	Waynesville	Clarksville	OH	Warren	Waynesville	C5	39.547222	-84.054444
150	Richmondian	C5	Waynesville	Clarksville	OH	Clinton		C5	39.415833	-83.989444
151	Richmondian	C5	Waynesville		OH	Butler	Hamilton	C5	39.425110	-84.554830
152	Richmondian	C5	Waynesville		IN	Ripley	Versailles	C5	39.080720	-85.250430
153	Richmondian	C5	Waynesville		OH	Warren		C5	39.48027	-84.5712
154	Richmondian	C5	Liberty		OH	Warren		C5	39.47997	-84.04893
155	Richmondian	C5	Waynesville	Blanchester	IN	Franklin		C5	39.3425	-84.95358
156	Richmondian	C5	Waynesville		OH	Warren		C5	39.54853	-84.05233
157	Richmondian	C6	Whitewater	Upper Whitewater	OH	Clinton	Clarksville	C6	39.412778	-83.956667
158	Richmondian	C6	Elkhorn		OH	Montgomery	Miamisburg	C6	39.642800	-84.286700
159	Richmondian	C6	Whitewater	Upper Whitewater	OH	Butler	Oxford	C6	39.506870	-84.745100
160	Richmondian	C5	Waynesville		IN	Ripley		C5	39.080440	-85.249730
161	Richmondian	C5	Waynesville	Blanchester	OH	Warren	Oregonia	C5	39.451408	-84.096107
162	Richmondian	C5	Waynesville		IN	Franklin	Brookville	C5	39.437950	-84.987400
163	Richmondian	C5	Liberty		IN	Franklin		C5	39.484600	-84.064033
164	Richmondian	C5	Liberty		OH	Butler	Oxford	C5	39.496414	-84.747600
165	Richmondian	C5	Whitewater		OH	Clinton	Clarksville	C5	39.387960	-83.924820
166	Richmondian	C5	Waynesville	Blanchester	OH	Butler	Miltonville	C5	39.527274	-84.467657
167	Richmondian	C5	Liberty		OH	Warren		C5	39.477600	-84.063010
168	Richmondian	C5	Liberty		IN	Franklin	Brookville	C5	39.480383	-84.948633
169	Richmondian	C5	Waynesville		OH	Warren	Morrow	C5	39.364620	-84.153270
170	Richmondian	C5	Liberty		IN	Dearborn	Weisburg	C5	39.215931	-85.045151

Appendix 1. Species distribution data

114	
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119	Exposures along walls and floor of emergency spillway for Caesar Creek Lake
120	Multiple streamside exposures along Flat Fork, upstream from where stream empties into Caesar Creek Lake
121	Roadcut on east side of US Route 421, 3.1 miles north of intersection with Indiana State Route 56 in Madison
122	Roadcut on Indiana State Route 1, 1.6 miles to 2.1 miles south of intersection with US Route 52 at Cedar Grove
123	Roadcut on west side of US Route 42, 1.2 miles north of Main Street in Waynesville
124	Roadcuts on both sides of AA highway (Kentucky State Route 9), 2.4 miles east of intersection with Kentucky State Route 11
125	Streamside exposures along creek that empties immediately below dam outlet for Caesar Creek Lake and that empties into Caesar's Creek from north side
126	Cedar Creek, Versailles
127	West of Hamburg
128	1st ck N of Rush Run S of Camden
129	Big slide bank on Cedar Creek
130	Blacksmith hollow
131	Blacksmith hollow, Oregonia
132	Blanchester
133	Brookville Lake Causeway, hillcut on W side of lake
134	Bulls Run, .5 mi S of Oxford
135	Caesar's Creek spillway excavation, damsite
136	Cowan Lake Dam Site, near Clarksville, OH
137	Cuts 14 and 15, Big Four, RR E of Weisburg, IN
138	Devil's backbone, Rt 725, 2 mi W of Camden, Oh
139	Dodges Creek
140	Dry Fork N of Miltonville
141	Fallen Timbers Creek
142	Fayetteville
143	Harper's Branch, Weisburg area
144	Hunter Creek and Stonelick Ck, Blanchester, OH
145	Lebanon
146	Madison
147	Oregonia
148	Perryville -1
149	roadcut on Rt 42 about 2 mi N of Waynesville, oh
150	Stony Hollow, 2nd Stream
151	Two Mile Hill, Hamilton area
152	Wash Bank, Cedar Cr. Versailles
153	Exposures along walls and floor of emergency spillway for Caesar Creek Lake
154	Multiple streamside exposures along Flat Fork, upstream from where stream empties into Caesar Creek Lake
155	Roadcut on Indiana State Route 1, 1.6 miles to 2.1 miles south of intersection with US Route 52 at Cedar Grove
156	Roadcut on west side of US Route 42, 1.2 miles north of Main Street in Waynesville
157	Cowen's Creek, Clarksville
158	Miamisburg, RR cut
159	Oxford
160	Big slide bank on Cedar Creek
161	Blacksmith Hollow
162	Bon Well Hill
163	Brookville Lake Causeway, Roadcut on hill west of lake
164	Bulls Run, 1/2 mile S. of Oxford
165	Cowan Lake Dam Site
166	Dry Fork N of Miltonville
167	Flat Fork Falls
168	Garr Hill
169	Halls Creek
170	Harpers Branch

Appendix 1. Species distribution data

171	Orthida	Glyptorthidae	<i>Glyptorthis</i>	<i>insculpta</i>	MUGM	22455	
172	Orthida	Glyptorthidae	<i>Glyptorthis</i>	<i>insculpta</i>	Field		IN-JE-0001
173	Orthida	Glyptorthidae	<i>Glyptorthis</i>	<i>insculpta</i>	Field		
174	Orthida	Glyptorthidae	<i>Glyptorthis</i>	<i>insculpta</i>	MUGM	15767	
175	Orthida	Glyptorthidae	<i>Glyptorthis</i>	<i>insculpta</i>	Field		
176	Orthida	Glyptorthidae	<i>Glyptorthis</i>	<i>insculpta</i>	Field		IN-FR-0005
177	Orthida	Glyptorthidae	<i>Glyptorthis</i>	<i>insculpta</i>	MUGM	22450	
178	Orthida	Glyptorthidae	<i>Glyptorthis</i>	<i>insculpta</i>	MUGM	22460	1.16H
179	Orthida	Glyptorthidae	<i>Glyptorthis</i>	<i>insculpta</i>	MUGM	11599	
180	Orthida	Glyptorthidae	<i>Glyptorthis</i>	<i>insculpta</i>	CiMNH	H324	
181	Orthida	Glyptorthidae	<i>Glyptorthis</i>	<i>insculpta</i>	MUGM	29512	2.6EE7
182	Orthida	Glyptorthidae	<i>Glyptorthis</i>	<i>insculpta</i>	MUGM	11605	
183	Orthida	Glyptorthidae	<i>Glyptorthis</i>	<i>insculpta</i>	MUGM	11600	
184	Orthida	Plectorthidae	<i>Hebertella</i>	<i>alternata</i>	Richard Hicklin, MS, 1933		Station 6-J
185	Orthida	Plectorthidae	<i>Hebertella</i>	<i>alveata</i>	MUGM	22585	1.3D5
186	Orthida	Plectorthidae	<i>Hebertella</i>	<i>alveata</i>	MUGM	22506	
187	Orthida	Plectorthidae	<i>Hebertella</i>	<i>alveata</i>	MUGM	22498	1.1A4
188	Orthida	Plectorthidae	<i>Hebertella</i>	<i>alveata</i>	MUGM	22504	2.1H7
189	Orthida	Plectorthidae	<i>Hebertella</i>	<i>alveata</i>	MUGM	22492	1.3B5
190	Orthida	Plectorthidae	<i>Hebertella</i>	<i>alveata</i>	CiMNH	17203	
191	Orthida	Plectorthidae	<i>Hebertella</i>	<i>alveata</i>	MUGM	15567	
192	Orthida	Plectorthidae	<i>Hebertella</i>	<i>alveata</i>	MUGM	22500	1.43L11
193	Orthida	Plectorthidae	<i>Hebertella</i>	<i>alveata</i>	MUGM	22496	1.1H4
194	Orthida	Plectorthidae	<i>Hebertella</i>	<i>alveata</i>	MUGM	22499	1.9A8
195	Orthida	Plectorthidae	<i>Hebertella</i>	<i>alveata</i>	MUGM	22497	1.1G9
196	Orthida	Plectorthidae	<i>Hebertella</i>	<i>alveata</i>	MUGM	11609	
197	Orthida	Plectorthidae	<i>Hebertella</i>	<i>occidentalis</i>	MUGM	64404	
198	Orthida	Plectorthidae	<i>Hebertella</i>	<i>occidentalis</i>	MUGM	24034	
199	Orthida	Plectorthidae	<i>Hebertella</i>	<i>occidentalis</i>	CiMNH	5394	
200	Orthida	Plectorthidae	<i>Hebertella</i>	<i>occidentalis</i>	Holland and Patzkowsky 2007		73021
201	Orthida	Plectorthidae	<i>Hebertella</i>	<i>occidentalis</i>	Holland and Patzkowsky 2007		72745
202	Orthida	Plectorthidae	<i>Hebertella</i>	<i>occidentalis</i>	Holland and Patzkowsky 2007		72697
203	Orthida	Plectorthidae	<i>Hebertella</i>	<i>occidentalis</i>	MUGM	22868	3.35C1
204	Orthida	Plectorthidae	<i>Hebertella</i>	<i>occidentalis</i>	CiMNH	27991	
205	Orthida	Plectorthidae	<i>Hebertella</i>	<i>occidentalis</i>	MUGM	22614	2.16Q1
206	Orthida	Plectorthidae	<i>Hebertella</i>	<i>occidentalis</i>	CiMNH	8008	
207	Orthida	Plectorthidae	<i>Hebertella</i>	<i>occidentalis</i>	MUGM	22603	1.46A5
208	Orthida	Plectorthidae	<i>Hebertella</i>	<i>occidentalis</i>	MUGM	22878	1.46A3
209	Orthida	Plectorthidae	<i>Hebertella</i>	<i>occidentalis</i>	CiMNH	8637	
210	Orthida	Plectorthidae	<i>Hebertella</i>	<i>occidentalis</i>	MUGM	14808	
211	Orthida	Plectorthidae	<i>Hebertella</i>	<i>occidentalis</i>	MUGM	22862	3.29K1
212	Orthida	Plectorthidae	<i>Hebertella</i>	<i>occidentalis</i>	MUGM	22851	3.26D1
213	Orthida	Plectorthidae	<i>Hebertella</i>	<i>occidentalis</i>	MUGM	22516	1.33C
214	Orthida	Plectorthidae	<i>Hebertella</i>	<i>occidentalis</i>	MUGM	22596	1.26A
215	Orthida	Plectorthidae	<i>Hebertella</i>	<i>occidentalis</i>	CiMNH	27970	
216	Orthida	Plectorthidae	<i>Hebertella</i>	<i>occidentalis</i>	MUGM	22869	3.35C2
217	Orthida	Plectorthidae	<i>Hebertella</i>	<i>occidentalis</i>	MUGM	22619	3.8D2
218	Orthida	Plectorthidae	<i>Hebertella</i>	<i>occidentalis</i>	MUGM	22512	1.23C14
219	Orthida	Plectorthidae	<i>Hebertella</i>	<i>occidentalis</i>	MUGM	22616	2.16Z
220	Orthida	Plectorthidae	<i>Hebertella</i>	<i>occidentalis</i>	CiMNH	28798	
221	Orthida	Plectorthidae	<i>Hebertella</i>	<i>occidentalis</i>	MUGM	22624	3.48A4
222	Orthida	Plectorthidae	<i>Hebertella</i>	<i>occidentalis</i>	MUGM	22867	3.29V2
223	Orthida	Plectorthidae	<i>Hebertella</i>	<i>occidentalis</i>	MUGM	22853	3.50A
224	Orthida	Plectorthidae	<i>Hebertella</i>	<i>occidentalis</i>	MUGM	22865	3.26F2B
225	Orthida	Plectorthidae	<i>Hebertella</i>	<i>occidentalis</i>	MUGM	22854	3.50A3
226	Orthida	Plectorthidae	<i>Hebertella</i>	<i>occidentalis</i>	MUGM	22866	3.29D4
227	Orthida	Plectorthidae	<i>Hebertella</i>	<i>occidentalis</i>	MUGM	22873	3.50A3

Appendix 1. Species distribution data

171	Richmondian	C5	Waynesville		OH	Warren	Morrow	C5	39.335556	-84.098333
172	Richmondian	C5	Liberty		IN	Jefferson	Madison	C5	38.775880	-85.363800
173	Richmondian	C5	Liberty		KY	Boyle	Perryville	C5	37.661300	-85.159400
174	Richmondian	C5	Waynesville		OH	Warren	Waynesville	C5	39.538670	-84.069220
175	Richmondian	C5	Liberty		IN	Wayne	Richmond	C5	37.748466	-84.297716
176	Richmondian	C5	Liberty		IN	Franklin	Brookville	C5	39.341966	-84.953650
177	Richmondian	C5	Liberty		OH	Butler	Oxford	C5	39.499650	-84.718883
178	Richmondian	C5	Waynesville		OH	Butler	Hamilton	C5	39.400300	-84.561680
179	Richmondian	C5	Liberty		IN	Dearborn	Weisburg	C5	39.215931	-85.045151
180	Richmondian	C5	Waynesville		IN	Dearborn	Weisburg	C5	39.217960	-85.045940
181	Richmondian	C5	Waynesville		IN	Franklin	Oldenburg	C5	39.339649	-85.204193
182	Richmondian	C5	Liberty		OH	Butler	Oxford	C5	39.507271	-84.745682
183	Richmondian	C5	Liberty		OH	Montgomery	Miamisburg	C5	39.642460	-84.284851
184	Maysvillian	C3	McMillan	Mt. Auburn	KY	Fleming	Flemingsburg	C3	38.3694	-83.7375
185	Richmondian	C5	Whitewater		OH	Preble		C5	39.654130	-84.647670
186	Richmondian	C5	Whitewater		OH	Preble	Camden	C5	39.627018	-84.663783
187	Richmondian	C5	Liberty		OH	Butler	Oxford	C5	39.506920	-84.745150
188	Richmondian	C5	Whitewater		IN	Wayne		C5	39.607780	-84.968410
189	Richmondian	C5	Whitewater		OH	Preble	Hamilton	C5	39.617230	-84.645930
190	Richmondian	C6	Elkhorn		OH	Preble	Eaton	C6	39.740833	-84.638056
191	Richmondian	C6	Whitewater	Upper Whitewater	IN	Wayne	Richmond	C6	39.748466	-84.898000
192	Richmondian	C6	Whitewater	Upper Whitewater	OH	Clinton	Clarksville	C6	39.387960	-83.924820
193	Richmondian	C6	Whitewater	Upper Whitewater	OH	Butler		C6	39.508290	-84.716950
194	Richmondian	C6	Elkhorn		OH	Montgomery	Dayton	C6	39.758770	-84.191658
195	Richmondian	C6	Whitewater	Upper Whitewater	IN	Wayne	Richmond	C6	39.828870	-84.890290
196	Richmondian	C6	Elkhorn		IN	Wayne	Richmond	C6	39.759790	-84.907490
197	Edenian	C1	Clays Ferry		KY	Franklin		C1	38.308000	-84.845000
198	Edenian	C1	Clays Ferry		KY	Madison		C1	37.881000	-84.341000
199	Edenian	C1	Clays Ferry		KY	Franklin		C1	38.343000	-84.850000
200	Edenian	C1	Kope		KY	Mason		C1	38.68263	-83.79007
201	Maysvillian	C1	Clays Ferry		KY	Washington		C1	37.64983	-85.07308
202	Maysvillian	C1	Clays Ferry		KY	Marion		C1	37.58577	-85.07163
203	Maysvillian	C2	McMillan	Bellevue	KY	Shelby		C2	38.182450	-85.218100
204	Maysvillian	C2	Fairview	Mt. Hope	OH	Hamilton	Cincinnati	C2	39.121667	-84.547500
205	Maysvillian	C2	McMillan	Bellevue	IN	Jefferson	Madison	C2	38.744884	-85.423721
206	Maysvillian	C2	McMillan	Bellevue	IN	Jefferson	Madison	C2	38.758700	-85.412770
207	Maysvillian	C2	McMillan	Bellevue	OH	Clermont	Williamsburg	C2	39.041667	-84.041667
208	Maysvillian	C2	Fairview	Fairmount	OH	Clermont	Williamsburg	C2	39.100000	-84.016667
209	Maysvillian	C2	McMillan	Bellevue	OH	Clermont	Bethel	C2	39.016080	-84.090340
210	Maysvillian	C2	McMillan	Bellevue	OH	Hamilton	Cincinnati	C2	39.122940	-84.523270
211	Maysvillian	C2	McMillan	Bellevue	KY	Spencer	Wilsonville	C2	38.126111	-85.406111
212	Maysvillian	C2	McMillan	Bellevue	KY	Nelson	Bardstown	C2	37.809100	-85.466450
213	Maysvillian	C2	Fairview	Fairmount	OH	Butler	Mason	C2	39.301503	-84.409692
214	Maysvillian	C2	McMillan	Bellevue	OH	Hamilton	Fairview	C2	39.123393	-84.528554
215	Maysvillian	C2	McMillan	Bellevue	KY	Boone	Walton	C2	38.875580	-84.610120
216	Maysvillian	C2	McMillan	Bellevue	KY	Shelby	Taylorsville	C2	38.235556	-85.322500
217	Maysvillian	C2	McMillan	Bellevue	KY	Mason	Maysville	C2	38.641021	-83.744613
218	Maysvillian	C2	Fairview	Fairmount	OH	Hamilton	Cheviot	C2	39.130892	-84.711058
219	Maysvillian	C2	McMillan	Bellevue	IN	Jefferson	Madison	C2	38.744884	-85.423721
220	Maysvillian	C2	Fairview	Fairmount	OH	Hamilton	Cincinnati	C2	39.110000	-84.567222
221	Maysvillian	C2	McMillan	Bellevue	KY	Carroll	Carrollton	C2	38.680933	-85.178583
222	Maysvillian	C2	McMillan	Bellevue	KY	Spencer	Wakefield	C2	37.971730	-85.309167
223	Maysvillian	C2	McMillan	Bellevue	KY	Henry	Campbellsburg	C2	38.523790	-85.203890
224	Maysvillian	C2	McMillan	Bellevue	KY	Nelson		C2	37.897683	-85.473300
225	Maysvillian	C2	McMillan	Bellevue	KY	Henry	Campbellsburg	C2	38.523790	-85.203890
226	Maysvillian	C2	McMillan	Bellevue	KY	Bullitt	Taylorsville	C2	38.046809	-85.359038
227	Maysvillian	C2	McMillan	Bellevue	KY	Henry	Campbellsburg	C2	38.523790	-85.203890

Appendix 1. Species distribution data

171	Lick Run
172	Madison-421N
173	Perryville
174	Rdcut on Rt 42 about 2mi N of Waynesville
175	Richmond
176	South Gate Hill
177	Talawanda Creek at County Line
178	Two mile Hill
179	
180	
181	
182	
183	
184	
185	Beasleys Cr
186	Devils Backbone Rt725 about 1.5 mi W of Camden
187	Dodges Ck
188	E side of Whitewater Ck
189	Pt. ck. Above Devil's Backbone
190	7m creek, 2mi s. of Eaton
191	Big cut on Rt 27 just south of Richmond
192	Cowans Ck.
193	Harkers Run
194	Huffman Dam
195	McDills Mills
196	Short ck.
197	Road cut on east side of US 127, beginning at intersection with Strohmeier Bypass, 0.4 miles south of US 127 bridge over Elkhorn Creek, and extending southward for 0.4 miles
198	Road cut on south side of KY 2328, 1.0 mile north of intersection with US 25 / US 421 at Clays Ferry, Kentucky
199	Road cuts on both sides of US 127, beginning 1.3 miles north of intersection with KY 2919 near Swallowfield, Kentucky, and extending 0.9 miles to the north
200	Roadcuts on both sides of new US Route 62 and 68, east of Maysville and beginning 0.3 miles south of bridge over Ohio River
201	Series of roadcuts primarily on north side of US Route 150, beginning at 0.6 miles west of intersection with old US Route 150 and continuing east for 0.4 miles
202	Two roadcuts on both sides of US Route 68, 0.4 and 0.9 miles west of intersection with Kentucky State Route 243
203	2.1mi S of Taylorsville Rd
204	Bald Knob cut
205	Clifty Ck, Madison
206	Clifty Creek
207	Clover Lick Ck
208	Clover Lick Ck
209	Cloverlick creek
210	Emming St Quarry
211	Exp about Wilsonville
212	Exp on Main St. at High Grove and up stream along Bardstown
213	Gano RR Cut
214	Hill NSE Fairview incline
215	L&N RR cut
216	L&N RR cuts
217	Marshall Sta quarry RR cut, Ck 8mi up from maysville
218	Muddy Ck.
219	Old Quarry at Madison
220	Price Hill
221	Reservoir Hill
222	RR cuts N of Wakefield
223	Sec along ck & rd from the Little KY R.
224	Sec from Cox Creek up to Cox County
225	Sec. along ck & rd from the little KY
226	Seciton up hill 1.5 mi NW Taylorsville
227	Section along ck & rd from the Little KY river to Campbellsburg

Appendix 1. Species distribution data

228	Orthida	Plectorthidae	<i>Hebertella</i>	<i>occidentalis</i>	MUGM	22517	1.48I1
229	Orthida	Plectorthidae	<i>Hebertella</i>	<i>occidentalis</i>	MUGM	22863	3.10H10
230	Orthida	Plectorthidae	<i>Hebertella</i>	<i>occidentalis</i>	MUGM	11584	
231	Orthida	Plectorthidae	<i>Hebertella</i>	<i>occidentalis</i>	MUGM	22605	1.46C3
232	Orthida	Plectorthidae	<i>Hebertella</i>	<i>occidentalis</i>	CiMNH	OL93.20.23	
233	Orthida	Plectorthidae	<i>Hebertella</i>	<i>occidentalis</i>	MUGM	11615	
234	Orthida	Plectorthidae	<i>Hebertella</i>	<i>occidentalis</i>	Holland and Patzkowsky 2007		72968
235	Orthida	Plectorthidae	<i>Hebertella</i>	<i>occidentalis</i>	Holland and Patzkowsky 2007		72889
236	Orthida	Plectorthidae	<i>Hebertella</i>	<i>occidentalis</i>	Holland and Patzkowsky 2007		72752
237	Orthida	Plectorthidae	<i>Hebertella</i>	<i>occidentalis</i>	Holland and Patzkowsky 2007		72721
238	Orthida	Plectorthidae	<i>Hebertella</i>	<i>occidentalis</i>	Holland and Patzkowsky 2007		72737
239	Orthida	Plectorthidae	<i>Hebertella</i>	<i>occidentalis</i>	Holland and Patzkowsky 2007		72668
240	Orthida	Plectorthidae	<i>Hebertella</i>	<i>occidentalis</i>	Holland and Patzkowsky 2007		72792
241	Orthida	Plectorthidae	<i>Hebertella</i>	<i>occidentalis</i>	Holland and Patzkowsky 2007		72706
242	Orthida	Plectorthidae	<i>Hebertella</i>	<i>occidentalis</i>	Holland and Patzkowsky 2007		73082
243	Orthida	Plectorthidae	<i>Hebertella</i>	<i>occidentalis</i>	Holland and Patzkowsky 2007		72705
244	Orthida	Plectorthidae	<i>Hebertella</i>	<i>occidentalis</i>	Holland and Patzkowsky 2007		72699
245	Orthida	Plectorthidae	<i>Hebertella</i>	<i>occidentalis</i>	Field		
246	Orthida	Plectorthidae	<i>Hebertella</i>	<i>occidentalis</i>	Oldroyd, PhD, 1978		0-2m
247	Orthida	Plectorthidae	<i>Hebertella</i>	<i>occidentalis</i>	CiMNH	20571	
248	Orthida	Plectorthidae	<i>Hebertella</i>	<i>occidentalis</i>	Holland Ph. D, 1990		
249	Orthida	Plectorthidae	<i>Hebertella</i>	<i>occidentalis</i>	Holland Ph. D, 1990		
250	Orthida	Plectorthidae	<i>Hebertella</i>	<i>occidentalis</i>	Holland Ph. D, 1990		
251	Orthida	Plectorthidae	<i>Hebertella</i>	<i>occidentalis</i>	Richard Hicklin, MS, 1933		Station F
252	Orthida	Plectorthidae	<i>Hebertella</i>	<i>occidentalis</i>	Richard Hicklin, MS, 1933		Station K
253	Orthida	Plectorthidae	<i>Hebertella</i>	<i>occidentalis</i>	Richard Hicklin, MS, 1933		Station T
254	Orthida	Plectorthidae	<i>Hebertella</i>	<i>occidentalis</i>	Richard Hicklin, MS, 1933		Station 6-J
255	Orthida	Plectorthidae	<i>Hebertella</i>	<i>occidentalis</i>	Holland and Patzkowsky 2007		72994
256	Orthida	Plectorthidae	<i>Hebertella</i>	<i>occidentalis</i>	Holland and Patzkowsky 2007		72903
257	Orthida	Plectorthidae	<i>Hebertella</i>	<i>occidentalis</i>	Holland and Patzkowsky 2007		73045
258	Orthida	Plectorthidae	<i>Hebertella</i>	<i>occidentalis</i>	Holland and Patzkowsky 2007		73103
259	Orthida	Plectorthidae	<i>Hebertella</i>	<i>occidentalis</i>	Holland and Patzkowsky 2007		72820
260	Orthida	Plectorthidae	<i>Hebertella</i>	<i>occidentalis</i>	Holland and Patzkowsky 2007		72681
261	Orthida	Plectorthidae	<i>Hebertella</i>	<i>occidentalis</i>	Holland and Patzkowsky 2007		72936
262	Orthida	Plectorthidae	<i>Hebertella</i>	<i>occidentalis</i>	Holland and Patzkowsky 2007		73030
263	Orthida	Plectorthidae	<i>Hebertella</i>	<i>occidentalis</i>	Holland and Patzkowsky 2007		72673
264	Orthida	Plectorthidae	<i>Hebertella</i>	<i>occidentalis</i>	CiMNH	28631	
265	Orthida	Plectorthidae	<i>Hebertella</i>	<i>occidentalis</i>	MUGM	22573	1.48A4
266	Orthida	Plectorthidae	<i>Hebertella</i>	<i>occidentalis</i>	MUGM	22621	3.26C1
267	Orthida	Plectorthidae	<i>Hebertella</i>	<i>occidentalis</i>	MUGM	22559	1.1K
268	Orthida	Plectorthidae	<i>Hebertella</i>	<i>occidentalis</i>	MUGM	22569	1.34C9
269	Orthida	Plectorthidae	<i>Hebertella</i>	<i>occidentalis</i>	MUGM	22852	3.39A
270	Orthida	Plectorthidae	<i>Hebertella</i>	<i>occidentalis</i>	MUGM	11598	
271	Orthida	Plectorthidae	<i>Hebertella</i>	<i>occidentalis</i>	MUGM	11587	
272	Orthida	Plectorthidae	<i>Hebertella</i>	<i>occidentalis</i>	Holland and Patzkowsky 2007		72720
273	Orthida	Plectorthidae	<i>Hebertella</i>	<i>occidentalis</i>	Holland and Patzkowsky 2007		72917
274	Orthida	Plectorthidae	<i>Hebertella</i>	<i>occidentalis</i>	Holland and Patzkowsky 2007		72921
275	Orthida	Plectorthidae	<i>Hebertella</i>	<i>occidentalis</i>	Holland and Patzkowsky 2007		73107
276	Orthida	Plectorthidae	<i>Hebertella</i>	<i>occidentalis</i>	Holland and Patzkowsky 2007		72861
277	Orthida	Plectorthidae	<i>Hebertella</i>	<i>occidentalis</i>	Holland and Patzkowsky 2007		72852
278	Orthida	Plectorthidae	<i>Hebertella</i>	<i>occidentalis</i>	Holland and Patzkowsky 2007		73119
279	Orthida	Plectorthidae	<i>Hebertella</i>	<i>occidentalis</i>	Holland and Patzkowsky 2007		72685
280	Orthida	Plectorthidae	<i>Hebertella</i>	<i>occidentalis</i>	Holland and Patzkowsky 2007		72722
281	Orthida	Plectorthidae	<i>Hebertella</i>	<i>occidentalis</i>	Holland and Patzkowsky 2007		73125
282	Orthida	Plectorthidae	<i>Hebertella</i>	<i>occidentalis</i>	CiMNH	21885	
283	Orthida	Plectorthidae	<i>Hebertella</i>	<i>occidentalis</i>	CiMNH	27730	
284	Orthida	Plectorthidae	<i>Hebertella</i>	<i>occidentalis</i>	MUGM	22872	2.9B4

Appendix 1. Species distribution data

228	Maysvillian	C2	Fairview	Fairmount	OH	Brown	Georgetown	C2	38.963333	-83.911111
229	Maysvillian	C2	McMillan	Bellevue	KY	Fleming	Tilton	C2	38.341667	-83.758333
230	Maysvillian	C2	McMillan	Bellevue	IN	Jefferson	Madison	C2	38.744884	-85.423721
231	Maysvillian	C2	McMillan	Bellevue	OH	Clermont	Williamsburg	C2	39.041667	-84.041667
232	Maysvillian	C2	Fairview	Fairmount	OH	Clermont	Batavia	C2	39.077077	-84.176500
233	Maysvillian	C2	Fairview	Fairmount	OH	Hamilton	Cincinnati	C2	39.161938	-84.456680
234	Maysvillian	C2	Fairview		OH	Hamilton		C2	39.29655	-84.4043
235	Maysvillian	C2	Bellevue		OH	Clermont		C2	39.17193	-84.12193
236	Maysvillian	C2	Calloway Creek		KY	Washington		C2	37.66092	-85.17058
237	Maysvillian	C2	Calloway Creek		KY	Lincoln		C2	37.43403	-84.84982
238	Maysvillian	C2	Calloway Creek		KY	Garrard		C2	37.58812	-84.47962
239	Maysvillian	C2	Fairview		OH	Campbell		C2	39.0059	-84.4501
240	Maysvillian	C2	Miamitown		KY	Kenton		C2	39.02778	-84.51055
241	Maysvillian	C2	Calloway Creek		KY	Lincoln		C2	37.44852	-84.83527
242	Maysvillian	C2	Fairview		KY	Mason		C2	38.68263	-83.79007
243	Maysvillian	C2	Calloway Creek		KY	Lincoln		C2	37.46393	-84.82255
244	Maysvillian	C2	Calloway Creek		KY	Marion		C2	37.58577	-85.07163
245	Maysvillian	C3	McMillan	Mt. Auburn	KY	Washington	Fredericktown	C3	37.762666	-85.339433
246	Maysvillian	C3	Dillsboro	Corryville	IN	Jefferson	Madison	C3	38.7511	-85.1417
247	Maysvillian	C3	McMillan	Corryville	OH	Hamilton	Cincinnati	C3	39.128056	-84.526389
248	Maysvillian	C3	Mt. Auburn		KY	Fleming	Flemingsburg	C3	38.4222	-83.7375
249	Maysvillian	C3	Mt. Auburn		KY	Lincoln	Gilbert	C3	37.5736	-84.6136
250	Maysvillian	C3	Mt. Auburn		KY	Trimble	Bedford	C3	38.6022	-85.2736
251	Maysvillian	C3	McMillan	Mt. Auburn	KY	Clark	Agawam	C3	37.8951	-84.0875
252	Maysvillian	C3	McMillan	Mt. Auburn	KY	Bath	Owingsville	C3	38.1478	-83.825
253	Maysvillian	C3	McMillan	Corryville	KY	Fleming	Concord	C3	38.3035	-83.7813
254	Maysvillian	C3	McMillan	Mt. Auburn	KY	Fleming	Flemingsburg	C3	38.3694	-83.7375
255	Maysvillian	C3	Corryville		OH	Hamilton		C3	39.29655	-84.4043
256	Maysvillian	C3	Corryville		OH	Clermont		C3	39.17193	-84.12193
257	Maysvillian	C3	Mount Auburn		OH	Warren		C3	39.32828	-84.6783
258	Maysvillian	C3	Mount Auburn		KY	Mason		C3	38.50455	-83.75855
259	Maysvillian	C3	Mount Auburn		OH	Brown		C3	38.87033	-83.91333
260	Maysvillian	C3	Gilbert		KY	Nelson		C3	37.76737	-85.35557
261	Maysvillian	C3	Mount Auburn		OH	Butler		C3	39.40603	-84.50192
262	Maysvillian	C3	Corryville		KY	Mason		C3	38.68263	-83.79007
263	Maysvillian	C3	Stingy Creek		KY	Lincoln		C3	37.57361	-84.61361
264	Richmondian	C4	Arnheim		OH	Butler	Maud	C4	39.345500	-84.386500
265	Richmondian	C4	Arnheim		OH	Brown	Russelville	C4	38.874444	-83.787222
266	Richmondian	C4	Arnheim		KY	Nelson	Bardstown	C4	37.769444	-85.357500
267	Richmondian	C4	Arnheim		OH	Butler		C4	39.529760	-84.740250
268	Richmondian	C4	Arnheim		OH	Warren	Morrow	C4	39.335556	-84.098333
269	Richmondian	C4	Arnheim		KY	Henry	Newcastle	C4	38.388052	-85.180318
270	Richmondian	C4	Arnheim		OH	Brown	Russelville	C4	38.874444	-83.787222
271	Richmondian	C4	Arnheim		OH	Warren	Oregonia	C4	39.451408	-84.096107
272	Richmondian	C4	Sunset		IN	Richmond		C4	37.74152	-84.25052
273	Richmondian	C4	Sunset		OH	Butler		C4	39.37238	-84.38675
274	Richmondian	C4	Sunset		OH	Butler		C4	39.37113	-84.38022
275	Richmondian	C4	Sunset		KY	Mason		C4	38.607	-83.76752
276	Richmondian	C4	Sunset		KY	Mason		C4	38.50455	-83.75855
277	Richmondian	C4	Sunset		KY	Fleming		C4	38.48523	-83.75887
278	Richmondian	C4	Oregonia		KY	Mason		C4	38.58483	-83.70102
279	Maysvillian	C4	Reba		KY	Nelson		C4	37.76737	-85.35557
280	Maysvillian	C4	Reba		KY	Lincoln		C4	37.57778	-84.61
281	Richmondian	C4	Oregonia		OH	Brown		C4	39.02827	-83.84772
282	Richmondian	C5	Liberty		OH	Butler	Oxford	C5	39.582890	-84.758110
283	Richmondian	C5	Waynesville		IN	Dearborn	Weisburg	C5	39.217960	-85.045940
284	Richmondian	C5	Liberty		IN	Ripley	Versailles	C5	39.081030	-85.251026

Appendix 1. Species distribution data

228	Shot Pouch Ck
229	South of Tilton
230	
231	
232	
233	
234	Hillside exposure at Trammel Fossil Park at north end of Tramway Road in Sharonville
235	Multiple streamside exposures along Stonelick Creek, downstream from Ohio State Route 131 bridge. Private property; permission required for entry.
236	Roadcut on both sides of US Route 150, beginning 0.1 mile west of Perryville Loop Road and 0.7 miles west of intersection with Kentucky State Route 2758 (Simmstown Road), and continuing for 0.9 miles east
237	Roadcut on east side of US Route 127, 3.1 miles south of intersection with Kentucky State Route 78 at Hustonville, and 0.5 mile north of Lincoln-Casey county line
238	Roadcut on north side of new Kentucky State Route 52, approximately 5.8 miles east of Lancaster
239	Roadcut on northeast side of AA highway (Kentucky State Route 9), 1.4 miles west of US Route 27 overpass
240	Roadcut on northeast side of Mason Road, 0.2 miles southeast of intersection with Taylor Mill Road
241	Roadcut on west side of US Route 127, 1.7 miles north of Lincoln-Casey county line, and 1.9 miles south of intersection with Kentucky State Route 78 at Hustonville
242	Roadcuts on both sides of new US Route 62 and 68, east of Maysville and beginning 0.3 miles south of bridge over Ohio River
243	Roadcuts on both sides of US Route 127, 1.5 miles north of Lincoln-Casey county line, and 2.1 miles south of intersection with Kentucky State Route 78 at Hustonville
244	Two roadcuts on both sides of US Route 68, 0.4 and 0.9 miles west of intersection with Kentucky State Route 243
245	Fredericktown
246	Large Roadcut across U. S. Highway 421 from cemetery, 0.9 miles north of Madison, Indiana, courthouse. NW 14 NE 1/4 sect. 35, T4N, R10E, Madison West quadrangle, Indiana-Kentucky
247	McMillan St.
248	Roadcuts along Kentucky State Route 32, 1-1.2 miles south of Kentucky State Route 11.
249	Roadcuts of U. S. Route 27, 0.8 miles south of Garrard/Lincoln County Line.
250	U. S. Route 42, 2.5 miles east of U.S. Route 421 in Bedford
251	
252	
253	
254	
255	Hillside exposure at Trammel Fossil Park at north end of Tramway Road in Sharonville
256	Multiple streamside exposures along Stonelick Creek, downstream from Ohio State Route 131 bridge. Private property; permission required for entry.
257	Multiple streamside exposures on Lick Run upstream and downstream of bridge for Ohio State Route 132
258	Roadcut on both sides of Kentucky State Route 11, 0.4 miles north of intersection with Kentucky State Route 324 at Weedonia
259	Roadcut on north side of Ohio State Route 125, west of Georgetown and on east side of valley for White Oak Creek
260	Roadcut on west side of US Route 150, 0.6 miles west of Nelson / Washington county line
261	Roadcuts on both sides of Bypass State Route 4, 0.3 miles south of intersection with Ohio State Route 4 and at overpass of Milliken Road
262	Roadcuts on both sides of new US Route 62 and 68, east of Maysville and beginning 0.3 miles south of bridge over Ohio River
263	Roadcuts on both sides of US Route 27, 0.8 miles south of Garrard - Lincoln county line
264	Big 4 RR cut
265	Ck north of Russelville
266	exp at ck 7.5mi E of Bardstown
267	Four Mile Ck.
268	Lick Run
269	Section in ck along rd S of Newcastle
270	
271	
272	Exposure at spillway for Lake Reba, east of Richmond and just south of Kentucky State Route 52
273	Hillside exposure and construction excavation behind Liberty Towne Centre on Cincinnati-Dayton Road, immediately south of intersection with Ohio State Route 129
274	Hillside exposure behind Stor-N-Lock at Liberty Pointe Shopping Area, on Cincinnati-Dayton Road, immediately south of intersection with Ohio State Route 129
275	Roadcut on both sides of AA highway (Kentucky State Route 9), 0.4 miles west of intersection with Kentucky State Route 11
276	Roadcut on both sides of Kentucky State Route 11, 0.4 miles north of intersection with Kentucky State Route 324 at Weedonia
277	Roadcut on east side of Kentucky State Route 11 at Fleming-Mason County Line.
278	Roadcut on south side of AA highway (Kentucky State Route 9), 3.6 miles east of intersection with Kentucky State Route 11 and 0.2 miles west of intersection with Kentucky State Route 1449
279	Roadcut on west side of US Route 150, 0.6 miles west of Nelson / Washington county line
280	Roadcuts on both sides of US Route 27, 0.5 miles south of Garrard-Lincoln county line.
281	Small quarry on south bank of Flat Fork, just east of where Fry Road crosses creek, north of Ohio 32 and west of intersection with US Route 62 at Mount Orab, Ohio. Private property; permission required for entry.
282	4 mile cr.
283	Big 4 RR cut 14
284	Branch of Cedar Ck flowing in from N, just N of Versailles

Appendix 1. Species distribution data

285	Orthida	Plectorthidae	<i>Hebertella</i>	<i>occidentalis</i>	MUGM	15825	
286	Orthida	Plectorthidae	<i>Hebertella</i>	<i>occidentalis</i>	MUGM	22558	1.1I7
287	Orthida	Plectorthidae	<i>Hebertella</i>	<i>occidentalis</i>	MUGM	22610	2.9A3
288	Orthida	Plectorthidae	<i>Hebertella</i>	<i>occidentalis</i>	CiMNH	27592	
289	Orthida	Plectorthidae	<i>Hebertella</i>	<i>occidentalis</i>	CiMNH	28661	
290	Orthida	Plectorthidae	<i>Hebertella</i>	<i>occidentalis</i>	MUGM	22551	1.1A5
291	Orthida	Plectorthidae	<i>Hebertella</i>	<i>occidentalis</i>	MUGM	22568	1.13H14
292	Orthida	Plectorthidae	<i>Hebertella</i>	<i>occidentalis</i>	MUGM	10506	1.42B3
293	Orthida	Plectorthidae	<i>Hebertella</i>	<i>occidentalis</i>	MUGM	22861	2.1A7
294	Orthida	Plectorthidae	<i>Hebertella</i>	<i>occidentalis</i>	MUGM	22599	1.38C6
295	Orthida	Plectorthidae	<i>Hebertella</i>	<i>occidentalis</i>	MUGM	7891	2.60E+11
296	Orthida	Plectorthidae	<i>Hebertella</i>	<i>occidentalis</i>	CiMNH	21320	
297	Orthida	Plectorthidae	<i>Hebertella</i>	<i>occidentalis</i>	MUGM	14988	
298	Orthida	Plectorthidae	<i>Hebertella</i>	<i>occidentalis</i>	MUGM	22571	1.3802
299	Orthida	Plectorthidae	<i>Hebertella</i>	<i>occidentalis</i>	MUGM	22557	1.1G7
300	Orthida	Plectorthidae	<i>Hebertella</i>	<i>occidentalis</i>	CiMNH		
301	Orthida	Plectorthidae	<i>Hebertella</i>	<i>occidentalis</i>	CiMNH	27517	
302	Orthida	Plectorthidae	<i>Hebertella</i>	<i>occidentalis</i>	MUGM	22600	1.43A4
303	Orthida	Plectorthidae	<i>Hebertella</i>	<i>occidentalis</i>	CiMNH	P50011	
304	Orthida	Plectorthidae	<i>Hebertella</i>	<i>occidentalis</i>	MUGM	22588	3.26B3
305	Orthida	Plectorthidae	<i>Hebertella</i>	<i>occidentalis</i>	CiMNH	28367	
306	Orthida	Plectorthidae	<i>Hebertella</i>	<i>occidentalis</i>	MUGM	24992	
307	Orthida	Plectorthidae	<i>Hebertella</i>	<i>occidentalis</i>	CiMNH	P37	
308	Orthida	Plectorthidae	<i>Hebertella</i>	<i>occidentalis</i>	MUGM	22601	1.1V7
309	Orthida	Plectorthidae	<i>Hebertella</i>	<i>occidentalis</i>	MUGM	22591	2.2A1
310	Orthida	Plectorthidae	<i>Hebertella</i>	<i>occidentalis</i>	CiMNH	28347	
311	Orthida	Plectorthidae	<i>Hebertella</i>	<i>occidentalis</i>	MUGM	22609	2.7A4
312	Orthida	Plectorthidae	<i>Hebertella</i>	<i>occidentalis</i>	CiMNH	29103	
313	Orthida	Plectorthidae	<i>Hebertella</i>	<i>occidentalis</i>	CiMNH	28648	
314	Orthida	Plectorthidae	<i>Hebertella</i>	<i>occidentalis</i>	CiMNH	21836	
315	Orthida	Plectorthidae	<i>Hebertella</i>	<i>occidentalis</i>	MUGM	11593	
316	Orthida	Plectorthidae	<i>Hebertella</i>	<i>occidentalis</i>	MUGM	11590	
317	Orthida	Plectorthidae	<i>Hebertella</i>	<i>occidentalis</i>	CiMNH	19514	
318	Orthida	Plectorthidae	<i>Hebertella</i>	<i>occidentalis</i>	MUGM	11623	
319	Orthida	Plectorthidae	<i>Hebertella</i>	<i>occidentalis</i>	CiMNH	21858	
320	Orthida	Plectorthidae	<i>Hebertella</i>	<i>occidentalis</i>	MUGM	11621	
321	Orthida	Plectorthidae	<i>Hebertella</i>	<i>occidentalis</i>	MUGM	11594	
322	Orthida	Plectorthidae	<i>Hebertella</i>	<i>occidentalis</i>	CiMNH	1.57-67	
323	Orthida	Plectorthidae	<i>Hebertella</i>	<i>occidentalis</i>	CiMNH	21811	
324	Orthida	Plectorthidae	<i>Hebertella</i>	<i>occidentalis</i>	CiMNH		
325	Orthida	Plectorthidae	<i>Hebertella</i>	<i>occidentalis</i>	MUGM	11591	
326	Orthida	Plectorthidae	<i>Hebertella</i>	<i>occidentalis</i>	Holland and Patzkowsky 2007		72863
327	Orthida	Plectorthidae	<i>Hebertella</i>	<i>occidentalis</i>	Holland and Patzkowsky 2007		72579
328	Orthida	Plectorthidae	<i>Hebertella</i>	<i>occidentalis</i>	Holland and Patzkowsky 2007		72882
329	Orthida	Plectorthidae	<i>Hebertella</i>	<i>occidentalis</i>	Holland and Patzkowsky 2007		72874
330	Orthida	Plectorthidae	<i>Hebertella</i>	<i>occidentalis</i>	Holland and Patzkowsky 2007		73035
331	Orthida	Plectorthidae	<i>Hebertella</i>	<i>occidentalis</i>	Holland and Patzkowsky 2007		72627
332	Orthida	Plectorthidae	<i>Hebertella</i>	<i>occidentalis</i>	Holland and Patzkowsky 2007		72432
333	Orthida	Plectorthidae	<i>Hebertella</i>	<i>occidentalis</i>	Holland and Patzkowsky 2007		73100
334	Orthida	Plectorthidae	<i>Hebertella</i>	<i>occidentalis</i>	Holland and Patzkowsky 2007		73087
335	Orthida	Plectorthidae	<i>Hebertella</i>	<i>occidentalis</i>	Holland and Patzkowsky 2007		72535
336	Orthida	Plectorthidae	<i>Hebertella</i>	<i>occidentalis</i>	Holland and Patzkowsky 2007		72949
337	Orthida	Plectorthidae	<i>Hebertella</i>	<i>occidentalis</i>	Holland and Patzkowsky 2007		72686
338	Orthida	Plectorthidae	<i>Hebertella</i>	<i>occidentalis</i>	Holland and Patzkowsky 2007		72624
339	Orthida	Plectorthidae	<i>Hebertella</i>	<i>occidentalis</i>	Holland and Patzkowsky 2007		73109
340	Orthida	Plectorthidae	<i>Hebertella</i>	<i>occidentalis</i>	Holland and Patzkowsky 2007		72952
341	Orthida	Plectorthidae	<i>Hebertella</i>	<i>occidentalis</i>	Holland and Patzkowsky 2007		72880

Appendix 1. Species distribution data

285	Richmondian	C5	Whitewater	Saluda	IN	Franklin		C5	39.484600	-84.064033
286	Richmondian	C5	Waynesville	Blanchester	OH	Butler		C5	39.503020	-84.759220
287	Richmondian	C5	Liberty		IN	Ripley	Versailles	C5	39.081030	-85.251026
288	Richmondian	C5	Liberty		IN	Dearborn	Weisburg	C5	39.217960	-85.045940
289	Richmondian	C5	Whitewater		OH	Preble	Camden	C5	39.627020	-84.664720
290	Richmondian	C5	Liberty		OH	Butler	Oxford	C5	39.506920	-84.745150
291	Richmondian	C5	Liberty		OH	Butler	Miltonville	C5	39.527274	-84.467657
292	Richmondian	C5	Whitewater		OH	Clinton	Wilmington	C5	39.476667	-83.894444
293	Richmondian	C5	Whitewater		IN	Wayne	Richmond	C5	39.756610	-84.904790
294	Richmondian	C5	Whitewater	Lower Whitewater	OH	Warren		C5	39.480710	-84.046740
295	Richmondian	C5	Liberty		IN	Dearborn	Weisburg	C5	39.217960	-85.045940
296	Richmondian	C5	Waynesville		OH	Clinton	Blanchester	C5	39.238170	-84.022960
297	Richmondian	C5	Liberty		OH	Butler	Oxford	C5	39.496414	-84.747600
298	Richmondian	C5	Liberty		OH	Warren	Waynesville	C5	39.492870	-84.023360
299	Richmondian	C5	Whitewater	Saluda	IN	Wayne	Richmond	C5	39.828870	-84.890290
300	Richmondian	C5	Whitewater		IN	Wayne	Richmond	C5	39.828870	-84.890290
301	Richmondian	C5	Whitewater		IN	Wayne	Richmond	C5	39.828870	-84.890290
302	Richmondian	C5	Waynesville		OH	Clinton	Clarksville	C5	39.301410	-83.981070
303	Richmondian	C5	Waynesville		IN	Dearborn	St. Leon	C5	39.283333	-84.959167
304	Richmondian	C5	Liberty		KY	Nelson	Bardstown	C5	37.818150	-85.448180
305	Richmondian	C5	Waynesville		OH	Clinton	Clarksville	C5	39.402010	-83.971300
306	Richmondian	C5	Waynesville	Blanchester	OH	Butler	Oxford	C5	39.523580	-84.733960
307	Richmondian	C5	Liberty		OH	Hamilton	Cincinnati	C5	39.580920	-84.751020
308	Richmondian	C5	Whitewater	Lower Whitewater	OH	Butler	Oxford	C5	39.499650	-84.718883
309	Richmondian	C5	Liberty		IN	Union		C5	39.632680	-84.948900
310	Richmondian	C5	Waynesville		OH	Clinton	Blanchester	C5	39.238170	-84.022960
311	Richmondian	C5	Whitewater	Saluda	IN	Franklin	Batesville	C5	39.299775	-85.241811
312	Richmondian	C5	Waynesville	Blanchester	IN	Ripley	Versailles	C5	39.080720	-85.250430
313	Richmondian	C5	Waynesville		IN	Ripley	Versailles	C5	39.080720	-85.250430
314	Richmondian	C5	Waynesville		OH	Brown	Russellville	C5	38.866390	-83.786800
315	Richmondian	C5	Waynesville		IN	Ripley	Versailles	C5	39.072231	-85.252373
316	Richmondian	C5	Whitewater		IN	Dearborn	Weisburg	C5	39.215931	-85.045151
317	Richmondian	C5	Whitewater		OH	Clinton	Westboro	C5	39.281410	-83.910760
318	Richmondian	C5	Liberty		IN	Franklin	Oldenburg	C5	39.339649	-85.204193
319	Richmondian	C5	Liberty		IN	Franklin	Oldenburg	C5	39.339700	-85.204320
320	Richmondian	C5	Whitewater		OH	Butler	Oxford	C5	39.507271	-84.745682
321	Richmondian	C5	Whitewater		OH	Preble	Camden	C5	39.627018	-84.663783
322	Richmondian	C5	Whitewater		OH	Montgomery	Centerville	C5	39.628360	-84.159320
323	Richmondian	C5	Whitewater		OH	Preble	Camden	C5	39.628910	-84.648690
324	Richmondian	C5	Whitewater		IN	Wayne	Boston Creek	C5	39.752560	-84.918570
325	Richmondian	C5	Whitewater		IN	Wayne	Richmond	C5	39.829060	-84.891563
326	Richmondian	C5	Whitewater		OH	Clinton		C5	39.3894	-83.927
327	Richmondian	C5	Whitewater	Lower	OH	Warren		C5	39.48027	-84.5712
328	Richmondian	C5	Liberty		OH	Warren		C5	39.47997	-84.04893
329	Richmondian	C5	Waynesville		OH	Warren		C5	39.48127	-84.6817
330	Richmondian	C5	Waynesville	Fort Ancient	OH	Warren		C5	39.32828	-84.6783
331	Richmondian	C5	Whitewater	Lower	OH	Greene		C5	39.79568	-84.08913
332	Richmondian	C5	Liberty		IN	Union		C5	39.48798	-84.94867
333	Richmondian	C5	Waynesville		IN	Jefferson		C5	38.77122	-85.36338
334	Richmondian	C5	Liberty		IN	Jefferson		C5	38.77827	-85.36523
335	Richmondian	C5	Whitewater	Lower	IN	Franklin		C5	39.3425	-84.95358
336	Richmondian	C5	Whitewater		OH	Adams		C5	38.92683	-83.5214
337	Richmondian	C5	Bardstown		KY	Nelson		C5	37.76737	-85.35557
338	Richmondian	C5	Waynesville		OH	Warren		C5	39.54853	-84.05233
339	Richmondian	C5	Bull Fork		KY	Mason		C5	38.59637	-83.71927
340	Richmondian	C5	Whitewater		OH	Adams		C5	38.8276	-83.50535
341	Richmondian	C5	Waynesville		OH	Warren		C5	39.48693	-84.6558

Appendix 1. Species distribution data

285	Brookville Lake Causeway, Roadcut on hill west of lake
286	Bulls Run
287	Ck running E, N of Versailles
288	cut 17
289	Devil's Backbone Creek
290	Dodges Ck
291	Dry Fork
292	Dutch Ck
293	Elkhorn Ck 4.5 mi S of Richmond
294	Flat Fork of Ceasars Ck
295	Harpers Branch, Flowing North
296	Hunter Creek and Upper Stonelick Creek
297	Ice rink excavation dump
298	Jonah's Run
299	McDills Mills
300	old quarries
301	Old quarries
302	Penquite Hollow
303	Route 1
304	section along ck following 4mi E of Bardstown
305	Sewalls Run
306	spoil piles, MiamiU, dump on 4mi Ck, near rt. 73
307	Stream exposures on Little Four Mile Creek, 1000 ft west of intersection w/loop road in Hueston Woods State Park (greater Cincy)
308	Talawanda Cr at County Line
309	trib of Silver Ck
310	U. Stonelick Creek
311	W Brnch Laughery Ck.
312	Wash Bank, Cedar Cr. Versailles
313	Washbank
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326	Cuts along sides of emergency spillway from Cowan Lake, immediately west of Ohio State Route 730
327	Exposures along walls and floor of emergency spillway for Caesar Creek Lake
328	Multiple streamside exposures along Flat Fork, upstream from where stream empties into Caesar Creek Lake
329	Multiple streamside exposures along unnamed stream that flows west of end of emergency spillway for Caesar Creek Lake and northward into Caesar Creek
330	Multiple streamside exposures on Lick Run upstream and downstream of bridge for Ohio State Route 132
331	Railroad cut on south side of railroad, immediately north of the Wright Brothers Memorial in Fairborn
332	Roadcut on both sides of Indiana State Route 101, 5.0 miles north of Brookville
333	Roadcut on east side of US Route 421, 2.6 miles north of intersection with Indiana State Route 56 in Madison
334	Roadcut on east side of US Route 421, 3.1 miles north of intersection with Indiana State Route 56 in Madison
335	Roadcut on Indiana State Route 1, 1.6 miles to 2.1 miles south of intersection with US Route 52 at Cedar Grove
336	Roadcut on south side of Ohio State Route 32, 0.3 miles east of intersection with Burnt Cabin Road
337	Roadcut on west side of US Route 150, 0.6 miles west of Nelson / Washington county line
338	Roadcut on west side of US Route 42, 1.2 miles north of Main Street in Waynesville
339	Roadcuts on both sides of AA highway (Kentucky State Route 9), 2.4 miles east of intersection with Kentucky State Route 11
340	Roadcuts on both sides of Ohio State Route 41, 2.8 miles north of intersection with Ohio State Route 125
341	Streamside exposures along creek that empties immediately below dam outlet for Caesar Creek Lake and that empties into Caesar's Creek from north side

Appendix 1. Species distribution data

342	Orthida	Plectorthidae	<i>Hebertella</i>	<i>occidentalis</i>	Holland and Patzkowsky 2007		73049
343	Orthida	Plectorthidae	<i>Hebertella</i>	<i>occidentalis</i>	CiMNH	5448	
344	Orthida	Plectorthidae	<i>Hebertella</i>	<i>occidentalis</i>	CiMNH	5496	
345	Orthida	Plectorthidae	<i>Hebertella</i>	<i>occidentalis</i>	CiMNH	28559	
346	Orthida	Plectorthidae	<i>Hebertella</i>	<i>occidentalis</i>	CiMNH		
347	Orthida	Plectorthidae	<i>Hebertella</i>	<i>occidentalis</i>	MUGM	22860	1.102
348	Orthida	Plectorthidae	<i>Hebertella</i>	<i>occidentalis</i>	CiMNH	28605	
349	Orthida	Plectorthidae	<i>Hebertella</i>	<i>occidentalis</i>	MUGM	22885	
350	Orthida	Plectorthidae	<i>Hebertella</i>	<i>occidentalis</i>	MUGM	22858	1.1G9
351	Orthida	Plectorthidae	<i>Hebertella</i>	<i>occidentalis</i>	MUGM	22613	1.4C3
352	Orthida	Plectorthidae	<i>Hebertella</i>	<i>occidentalis</i>	MUGM	22608	2.10E+05
353	Orthida	Plectorthidae	<i>Hebertella</i>	<i>occidentalis</i>	CiMNH	27526	
354	Orthida	Plectorthidae	<i>Hebertella</i>	<i>occidentalis</i>	CiMNH	6235	
355	Orthida	Plectorthidae	<i>Hebertella</i>	<i>occidentalis</i>	CiMNH	28473	
356	Orthida	Plectorthidae	<i>Hebertella</i>	<i>occidentalis</i>	CiMNH	5485	
357	Orthida	Plectorthidae	<i>Hebertella</i>	<i>occidentalis</i>	CiMNH	20561	
358	Orthida	Plectorthidae	<i>Hebertella</i>	<i>occidentalis</i>	CiMNH	28268	
359	Orthida	Plectorthidae	<i>Hebertella</i>	<i>occidentalis</i>	Holland and Patzkowsky 2007		72632
360	Orthida	Plectorthidae	<i>Hebertella</i>	<i>occidentalis</i>	Holland and Patzkowsky 2007		72455
361	Orthida	Plectorthidae	<i>Hebertella</i>	<i>occidentalis</i>	MUGM	11631	
362	Orthida	Plectorthidae	<i>Hebertella</i>	<i>occidentalis</i>	MUGM	11622	
363	Orthida	Plectorthidae	<i>Hebertella</i>	<i>occidentalis</i>	MUGM	11629	
364	Orthida	Plectorthidae	<i>Hebertella</i>	<i>occidentalis</i>	MUGM	11578	
365	Orthida	Plectorthidae	<i>Hebertella</i>	<i>occidentalis</i>	MUGM	11588	
366	Orthida	Plectorthidae	<i>Hebertella</i>	<i>occidentalis</i>	MUGM	11624	
367	Orthida	Plectorthidae	<i>Hebertella</i>	<i>occidentalis</i>	MUGM	11610	
368	Orthida	Plectorthidae	<i>Hebertella</i>	<i>occidentalis</i>	Field		
369	Orthida	Plectorthidae	<i>Hebertella</i>	<i>occidentalis</i>	Field		IN-JE-0003
370	Orthida	Plectorthidae	<i>Hebertella</i>	<i>occidentalis</i>	Field		
371	Orthida	Plectorthidae	<i>Hebertella</i>	<i>occidentalis</i>	Field		
372	Orthida	Plectorthidae	<i>Hebertella</i>	<i>occidentalis</i>	Field		
373	Orthida	Plectorthidae	<i>Hebertella</i>	<i>occidentalis</i>	Field		
374	Orthida	Plectorthidae	<i>Hebertella</i>	<i>occidentalis</i>	Field		
375	Orthida	Plectorthidae	<i>Hebertella</i>	<i>occidentalis</i>	Field		
376	Orthida	Plectorthidae	<i>Hebertella</i>	<i>occidentalis</i>	Field		
377	Orthida	Plectorthidae	<i>Hebertella</i>	<i>occidentalis</i>	Field		
378	Orthida	Plectorthidae	<i>Hebertella</i>	<i>occidentalis</i>	Field		
379	Orthida	Plectorthidae	<i>Hebertella</i>	<i>occidentalis</i>	Field		IN-FR-0001
380	Orthida	Plectorthidae	<i>Hebertella</i>	<i>occidentalis</i>	Field		OH-WA-0001
381	Orthida	Plectorthidae	<i>Hebertella</i>	<i>occidentalis</i>	Field		IN-FR-0003
382	Orthida	Plectorthidae	<i>Hebertella</i>	<i>occidentalis</i>	Field		IN-JE-0001
383	Orthida	Plectorthidae	<i>Hebertella</i>	<i>occidentalis</i>	Field		IN-FR-0005
384	Orthida	Heterorthidae	<i>Heterorthina</i>	<i>fairmountensis</i>	Holland and Patzkowsky 2007		73126
385	Orthida	Plectorthidae	<i>Heterorthina</i>	<i>fairmountensis</i>	CiMNH	34904	
386	Rhynchonellida	Rhynchotrematidae	<i>Hiscobeccus</i>	<i>capax</i>	MUGM	25554	2.2A1
387	Rhynchonellida	Rhynchotrematidae	<i>Hiscobeccus</i>	<i>capax</i>	CiMNH	37287	
388	Rhynchonellida	Rhynchotrematidae	<i>Hiscobeccus</i>	<i>capax</i>	MUGM	25544	
389	Rhynchonellida	Rhynchotrematidae	<i>Hiscobeccus</i>	<i>capax</i>	MUGM	25587	3.26B4
390	Rhynchonellida	Rhynchotrematidae	<i>Hiscobeccus</i>	<i>capax</i>	MUGM	25553	2.1M1
391	Rhynchonellida	Rhynchotrematidae	<i>Hiscobeccus</i>	<i>capax</i>	MUGM	25500	1.3D3
392	Rhynchonellida	Rhynchotrematidae	<i>Hiscobeccus</i>	<i>capax</i>	CiMNH	38372	
393	Rhynchonellida	Rhynchotrematidae	<i>Hiscobeccus</i>	<i>capax</i>	MUGM	25560	2.5C3
394	Rhynchonellida	Rhynchotrematidae	<i>Hiscobeccus</i>	<i>capax</i>	CiMNH		
395	Rhynchonellida	Rhynchotrematidae	<i>Hiscobeccus</i>	<i>capax</i>	MUGM	25580	2.9B4
396	Rhynchonellida	Rhynchotrematidae	<i>Hiscobeccus</i>	<i>capax</i>	MUGM	14200	
397	Rhynchonellida	Rhynchotrematidae	<i>Hiscobeccus</i>	<i>capax</i>	MUGM	25498	1.1I7A
398	Rhynchonellida	Rhynchotrematidae	<i>Hiscobeccus</i>	<i>capax</i>	MUGM	25480	

Appendix 1. Species distribution data

342	Richmondian	C5	Bull Fork		KY	Fleming		C5	38.40108	-83.72325
343	Richmondian	C6	Elkhorn		OH	Preble	Morning Sun	C6	39.591870	-84.741360
344	Richmondian	C6	Elkhorn		OH	Preble	Eaton	C6	39.740833	-84.638056
345	Richmondian	C6	Elkhorn		OH	Montgomery	Centerville	C6	39.628360	-84.159320
346	Richmondian	C6	Whitewater	Upper Whitewater	IN	Ripley	Versailles	C6	39.080440	-85.249730
347	Richmondian	C6	Whitewater	Upper Whitewater	OH	Butler		C6	39.506920	-84.745150
348	Richmondian	C6	Elkhorn		OH	Preble	Morning Sun	C6	39.591870	-84.741360
349	Richmondian	C6	Elkhorn		OH	Montgomery	Germantown	C6	39.626038	-84.369080
350	Richmondian	C6	Whitewater	Upper Whitewater	IN	Wayne	Richmond	C6	39.828870	-84.890290
351	Richmondian	C6	Elkhorn		OH	Preble	Eaton	C6	39.744221	-84.636467
352	Richmondian	C6	Elkhorn		IN	Wayne	Richmond	C6	39.759790	-84.907490
353	Richmondian	C6	Elkhorn		IN	Wayne	Richmond	C6	39.759790	-84.907490
354	Richmondian	C6	Elkhorn		IN	Wayne	Richmond	C6	39.759790	-84.907490
355	Richmondian	C6	Elkhorn		IN	Ripley	Versailles	C6	39.071910	-85.251880
356	Richmondian	C6	Elkhorn		IN	Franklin	Hamburg	C6	39.380700	-85.250890
357	Richmondian	C6	Elkhorn		OH	Preble	Morning Sun	C6	39.596280	-84.737220
358	Richmondian	C6	Elkhorn		OH	Preble	Eaton	C6	39.743760	-84.636720
359	Richmondian	C6	Whitewater	Upper	OH	Greene		C6	39.79568	-84.08913
360	Richmondian	C6	Whitewater	Upper	IN	Wayne		C6	39.78728	-84.90183
361	Maysvillian	C2	McMillan	Bellevue	IN	Jefferson	Madison	C2	38.744884	-85.423721
362	Maysvillian	C2	McMillan	Bellevue	OH	Hamilton	Cincinnati	C2	39.161938	-84.456680
363	Richmondian	C5	Waynesville		IN	Ripley	Versailles	C5	39.072231	-85.252373
364	Richmondian	C5	Waynesville		IN	Dearborn	Weisburg	C5	39.215931	-85.045151
365	Richmondian	C5	Waynesville		OH	Clinton	Clarksville	C5	39.387960	-83.924820
366	Richmondian	C5	Liberty		OH	Butler	Oxford	C5	39.507271	-84.745682
367	Richmondian	C6	Elkhorn		IN	Wayne	Richmond	C6	39.759790	-84.907490
368	Maysvillian	C2	McMillan	Bellevue	KY	Lincoln		C2	37.744033	-85.262083
369	Maysvillian	C2	McMillan	Bellevue	IN	Jefferson	Madison	C2	38.749233	-85.376783
370	Maysvillian	C2	McMillan	Bellevue	KY	Kenton		C2	39.024516	-84.508550
371	Maysvillian	C2	McMillan		KY	Bullitt	Taylorsville	C2	38.044016	-85.283933
372	Maysvillian	C2	McMillan		KY	Bullitt	Taylorsville	C2	38.038617	-85.291583
373	Maysvillian	C2	McMillan		KY	Bullitt	Taylorsville	C2	38.035100	-85.295766
374	Maysvillian	C3	McMillan	Mt. Auburn	KY	Trimble	Bedford	C3	38.601383	-85.274216
375	Maysvillian	C3	McMillan	Mt. Auburn	KY	Madison	Bybee	C3	37.709050	-84.314850
376	Maysvillian	C3	McMillan	Mt. Auburn	KY	Washington	Fredericktown	C3	37.723450	-85.281666
377	Maysvillian	C3	McMillan	Mt. Auburn	KY	Lincoln		C3	37.577533	-84.610283
378	Maysvillian	C3	McMillan	Corryville	KY	Washington		C3	37.764900	-85.353416
379	Richmondian	C5	Liberty		IN	Franklin	Brookville	C5	39.437950	-84.987400
380	Richmondian	C5	Waynesville		OH	Warren		C5	39.477600	-84.063010
381	Richmondian	C5	Liberty		IN	Franklin	Brookville	C5	39.480383	-84.948633
382	Richmondian	C5	Liberty		IN	Jefferson	Madison	C5	38.775880	-85.363800
383	Richmondian	C5	Liberty		IN	Franklin	Brookville	C5	39.341966	-84.953650
384	Maysvillian	C2	Miamitown		OH	Hamilton		C2	39.29655	-84.4043
385	Maysvillian	C3	McMillan	Corryville	OH	Butler	Hamilton	C3	39.399360	-84.561260
386	Richmondian	C5	Liberty		IN	Union	Liberty	C5	39.636830	-84.956360
387	Richmondian	C5	Whitewater		OH	Butler	Oxford	C5	39.536111	-84.745556
388	Richmondian	C5	Whitewater		IN	Wayne	Richmond	C5	39.756610	-84.904790
389	Richmondian	C5	Whitewater		KY	Nelson	Bardstown	C5	37.785000	-85.406111
390	Richmondian	C5	Whitewater		IN	Wayne	Richmond	C5	37.748466	-84.297716
391	Richmondian	C5	Whitewater		OH	Preble		C5	39.654130	-84.647670
392	Richmondian	C5	Waynesville	Marble Hill	KY	Trimble	Bedford	C5	38.592550	-85.317700
393	Richmondian	C5	Whitewater		IN	Franklin	Laurel	C5	39.500630	-85.186080
394	Richmondian	C5	Waynesville	Clarksville	OH	Clinton	Blanchester	C5	39.293110	-83.988880
395	Richmondian	C5	Liberty		IN	Ripley	Versailles	C5	39.081030	-85.251026
396	Richmondian	C5	Liberty		IN	Franklin		C5	39.484600	-84.064033
397	Richmondian	C5	Waynesville	Blanchester	OH	Butler		C5	39.503020	-84.759220
398	Richmondian	C5	Liberty		OH	Butler	Oxford	C5	39.496414	-84.747600

Appendix 1. Species distribution data

342	Three roadcuts on both sides Kentucky State Route 32, beginning 0.6 miles southeast of the intersection of with Kentucky State Route 11 on the south side of Flemingsburg and continuing for 0.6 miles to the southeast.
343	1 mile SE of Morning Sun
344	7mi creek
345	base quarry
346	Cedar Creek, Versailles
347	Coral Banks
348	Creek
349	Highway Garage, n of germantown
350	McDills Mills
351	Middle exposure
352	Short ck.
353	Short Creek
354	Short Creek, 2 miles south of Richmond
355	
356	
357	
358	
359	Railroad cut on south side of railroad, immediately north of the Wright Brothers Memorial in Fairborn
360	Roadcuts on both sides of US Route 27, 0.8 miles north of intersection with Beelor Road
361	Old Quarry at Madison
362	
363	
364	
365	
366	
367	Short Ck.
368	Lincoln Homestead
369	Madison-421S
370	Taylor Mill Rd.
371	Taylorsville Lake-1
372	Taylorsville Lake-2
373	Taylorsville Lake-3
374	Bedford
375	Bybee
376	Fredericktown
377	Lincoln County Line
378	Nelson/Washington line
379	Bon Well Hill
380	Caesar Creek Spillway
381	Garr Hill
382	Madison-421N
383	South Gate Hill
384	Hillside exposure at Trammel Fossil Park at north end of Tramway Road in Sharonville
385	
386	1 mi W of Liberty, Silver Cr trib
387	2 mi N of Oxford
388	2nd trib Elkhorn Ck
389	4mi E of Bardstown
390	Across from Garr-Scott Plant
391	Beasleys Cr.
392	Bedford
393	Big Sains Ck
394	Blanchester
395	Branch of Cedar Ck flowing in from N, just N of Versailles
396	Brookville Lake Causeway, Roadcut on hill west of lake
397	Bulls Run
398	Bulls Run, 1/2 mile S. of Oxford

Appendix 1. Species distribution data

399	Rhynchonellida	Rhynchotrematidae	<i>Hiscobeccus</i>	<i>capax</i>	Field		OH-WA-0001
400	Rhynchonellida	Rhynchotrematidae	<i>Hiscobeccus</i>	<i>capax</i>	MUGM	25541	1.54A7C
401	Rhynchonellida	Rhynchotrematidae	<i>Hiscobeccus</i>	<i>capax</i>	MUGM	25558	2.2G
402	Rhynchonellida	Rhynchotrematidae	<i>Hiscobeccus</i>	<i>capax</i>	CiMNH	38227	
403	Rhynchonellida	Rhynchotrematidae	<i>Hiscobeccus</i>	<i>capax</i>	CiMNH	38222	
404	Rhynchonellida	Rhynchotrematidae	<i>Hiscobeccus</i>	<i>capax</i>	MUGM	25515	1.43L4
405	Rhynchonellida	Rhynchotrematidae	<i>Hiscobeccus</i>	<i>capax</i>	MUGM	25582	2.3A2
406	Rhynchonellida	Rhynchotrematidae	<i>Hiscobeccus</i>	<i>capax</i>	CiMNH	27589	
407	Rhynchonellida	Rhynchotrematidae	<i>Hiscobeccus</i>	<i>capax</i>	MUGM	15717	
408	Rhynchonellida	Rhynchotrematidae	<i>Hiscobeccus</i>	<i>capax</i>	CiMNH	38205	
409	Rhynchonellida	Rhynchotrematidae	<i>Hiscobeccus</i>	<i>capax</i>	MUGM	25459	1.1A2
410	Rhynchonellida	Rhynchotrematidae	<i>Hiscobeccus</i>	<i>capax</i>	MUGM	25464	1.1A6B
411	Rhynchonellida	Rhynchotrematidae	<i>Hiscobeccus</i>	<i>capax</i>	MUGM	25528	1.13H15
412	Rhynchonellida	Rhynchotrematidae	<i>Hiscobeccus</i>	<i>capax</i>	MUGM	25532	1.38H2
413	Rhynchonellida	Rhynchotrematidae	<i>Hiscobeccus</i>	<i>capax</i>	MUGM	25520	1.38C4
414	Rhynchonellida	Rhynchotrematidae	<i>Hiscobeccus</i>	<i>capax</i>	Field		IN-FR-0003
415	Rhynchonellida	Rhynchotrematidae	<i>Hiscobeccus</i>	<i>capax</i>	MUGM	25546	1.54B10
416	Rhynchonellida	Rhynchotrematidae	<i>Hiscobeccus</i>	<i>capax</i>	MUGM	25505	1.1HH
417	Rhynchonellida	Rhynchotrematidae	<i>Hiscobeccus</i>	<i>capax</i>	MUGM	25564	2.60E+06
418	Rhynchonellida	Rhynchotrematidae	<i>Hiscobeccus</i>	<i>capax</i>	CiMNH	11798	
419	Rhynchonellida	Rhynchotrematidae	<i>Hiscobeccus</i>	<i>capax</i>	Field		IN-JE-0001
420	Rhynchonellida	Rhynchotrematidae	<i>Hiscobeccus</i>	<i>capax</i>	MUGM	15954	
421	Rhynchonellida	Rhynchotrematidae	<i>Hiscobeccus</i>	<i>capax</i>	MUGM	15768	
422	Rhynchonellida	Rhynchotrematidae	<i>Hiscobeccus</i>	<i>capax</i>	MUGM	25491	1.1N
423	Rhynchonellida	Rhynchotrematidae	<i>Hiscobeccus</i>	<i>capax</i>	MUGM	25531	1.18C1
424	Rhynchonellida	Rhynchotrematidae	<i>Hiscobeccus</i>	<i>capax</i>	MUGM	15826	
425	Rhynchonellida	Rhynchotrematidae	<i>Hiscobeccus</i>	<i>capax</i>	CiMNH		
426	Rhynchonellida	Rhynchotrematidae	<i>Hiscobeccus</i>	<i>capax</i>	CiMNH	38207	
427	Rhynchonellida	Rhynchotrematidae	<i>Hiscobeccus</i>	<i>capax</i>	CiMNH	38220	
428	Rhynchonellida	Rhynchotrematidae	<i>Hiscobeccus</i>	<i>capax</i>	CiMNH	38233	
429	Rhynchonellida	Rhynchotrematidae	<i>Hiscobeccus</i>	<i>capax</i>	CiMNH	38219	
430	Rhynchonellida	Rhynchotrematidae	<i>Hiscobeccus</i>	<i>capax</i>	MUGM	25517	
431	Rhynchonellida	Rhynchotrematidae	<i>Hiscobeccus</i>	<i>capax</i>	CiMNH	38228	
432	Rhynchonellida	Rhynchotrematidae	<i>Hiscobeccus</i>	<i>capax</i>	CiMNH	38186	
433	Rhynchonellida	Rhynchotrematidae	<i>Hiscobeccus</i>	<i>capax</i>	MUGM	15559	
434	Rhynchonellida	Rhynchotrematidae	<i>Hiscobeccus</i>	<i>capax</i>	MUGM	25538	1.56A2
435	Rhynchonellida	Rhynchotrematidae	<i>Hiscobeccus</i>	<i>capax</i>	Field		IN-FR-0005
436	Rhynchonellida	Rhynchotrematidae	<i>Hiscobeccus</i>	<i>capax</i>	MUGM	25516	1.35C4
437	Rhynchonellida	Rhynchotrematidae	<i>Hiscobeccus</i>	<i>capax</i>	MUGM	25526	1.43H8
438	Rhynchonellida	Rhynchotrematidae	<i>Hiscobeccus</i>	<i>capax</i>	CiMNH	P37	
439	Rhynchonellida	Rhynchotrematidae	<i>Hiscobeccus</i>	<i>capax</i>	MUGM	25506	
440	Rhynchonellida	Rhynchotrematidae	<i>Hiscobeccus</i>	<i>capax</i>	MUGM	25535	1.51B6
441	Rhynchonellida	Rhynchotrematidae	<i>Hiscobeccus</i>	<i>capax</i>	MUGM	25536	1.51B4
442	Rhynchonellida	Rhynchotrematidae	<i>Hiscobeccus</i>	<i>capax</i>	MUGM	25577	2.6C3
443	Rhynchonellida	Rhynchotrematidae	<i>Hiscobeccus</i>	<i>capax</i>	MUGM	25534	
444	Rhynchonellida	Rhynchotrematidae	<i>Hiscobeccus</i>	<i>capax</i>	MUGM	25555	2.2A2
445	Rhynchonellida	Rhynchotrematidae	<i>Hiscobeccus</i>	<i>capax</i>	CiMNH	28293	
446	Rhynchonellida	Rhynchotrematidae	<i>Hiscobeccus</i>	<i>capax</i>	MUGM	14993	
447	Rhynchonellida	Rhynchotrematidae	<i>Hiscobeccus</i>	<i>capax</i>	MUGM	11209	
448	Rhynchonellida	Rhynchotrematidae	<i>Hiscobeccus</i>	<i>capax</i>	MUGM	26075	
449	Rhynchonellida	Rhynchotrematidae	<i>Hiscobeccus</i>	<i>capax</i>	MUGM	11388	
450	Rhynchonellida	Rhynchotrematidae	<i>Hiscobeccus</i>	<i>capax</i>	Holland and Patzkowsky 2007		72868
451	Rhynchonellida	Rhynchotrematidae	<i>Hiscobeccus</i>	<i>capax</i>	Holland and Patzkowsky 2007		72562
452	Rhynchonellida	Rhynchotrematidae	<i>Hiscobeccus</i>	<i>capax</i>	Holland and Patzkowsky 2007		72881
453	Rhynchonellida	Rhynchotrematidae	<i>Hiscobeccus</i>	<i>capax</i>	Holland and Patzkowsky 2007		72871
454	Rhynchonellida	Rhynchotrematidae	<i>Hiscobeccus</i>	<i>capax</i>	Holland and Patzkowsky 2007		72432
455	Rhynchonellida	Rhynchotrematidae	<i>Hiscobeccus</i>	<i>capax</i>	Holland and Patzkowsky 2007		73099

Appendix 1. Species distribution data

399	Richmondian	C5	Waynesville		OH	Warren		C5	39.477600	-84.063010
400	Richmondian	C5	Whitewater	Lower Whitewater	OH	Adams	Harshasville	C5	38.907870	-83.543800
401	Richmondian	C5	Waynesville		IN	Union	Brownsville	C5	39.691940	-84.973040
402	Richmondian	C5	Liberty		IN	Jefferson	Madison	C5	38.758700	-85.412770
403	Richmondian	C5	Waynesville	Clarksville	OH	Butler	Oxford	C5	39.497880	-84.713870
404	Richmondian	C5	Waynesville		OH	Clinton	Clarksville	C5	39.387960	-83.924820
405	Richmondian	C5	Liberty		IN	Franklin	Mixersville	C5	39.488660	-84.825510
406	Richmondian	C5	Liberty		IN	Dearborn	Weisburg	C5	39.217960	-85.045940
407	Richmondian	C5	Whitewater		OH	Preble	Camden	C5	39.627180	-84.664140
408	Richmondian	C5	Whitewater		OH	Preble	Camden	C5	39.617230	-84.645930
409	Richmondian	C5	Liberty		OH	Butler	Oxford	C5	39.506920	-84.745150
410	Richmondian	C5	Liberty		OH	Butler	Oxford	C5	39.534100	-84.737760
411	Richmondian	C5	Liberty		OH	Butler	Miltonville	C5	39.527274	-84.467657
412	Richmondian	C5	Liberty		OH	Warren	Waynesville	C5	39.494444	-84.103889
413	Richmondian	C5	Liberty		OH	Warren		C5	39.480710	-84.046740
414	Richmondian	C5	Liberty		IN	Franklin	Brookville	C5	39.480383	-84.948633
415	Richmondian	C5	Whitewater		OH	Adams	Harshaville	C5	38.579167	-83.576389
416	Richmondian	C5	Whitewater		OH	Butler		C5	39.508290	-84.716950
417	Richmondian	C5	Waynesville		IN	Dearborn	Weisburg	C5	39.217960	-85.045940
418	Richmondian	C5	Liberty		OH	Preble	College Corner	C5	39.567550	-84.814530
419	Richmondian	C5	Liberty		IN	Jefferson	Madison	C5	38.775880	-85.363800
420	Richmondian	C5	Liberty		OH	Butler	Oxford	C5	39.496414	-84.747600
421	Richmondian	C5	Liberty		OH	Warren	Harveysburg	C5	39.503658	-84.010632
422	Richmondian	C5	Waynesville	Clarksville	OH	Butler		C5	39.508937	-84.734257
423	Richmondian	C5	Waynesville		OH	Butler		C5	39.448673	-84.683962
424	Richmondian	C5	Whitewater	Saluda	IN	Franklin	Brookville	C5	39.480280	-84.948440
425	Richmondian	C5	Liberty		OH	Butler	Oxford	C5	39.506870	-84.745100
426	Richmondian	C5	Whitewater		IN	Wayne	Richmond	C5	39.759790	-84.918910
427	Richmondian	C5	Whitewater		OH	Preble	Camden	C5	39.585833	-84.656111
428	Richmondian	C5	Whitewater		OH	Preble	Camden	C5	39.571944	-84.651667
429	Richmondian	C5	Liberty		OH	Preble	Camden	C5	39.543611	-84.638333
430	Richmondian	C5	Liberty		OH	Warren	Waynesville	C5	39.538670	-84.069220
431	Richmondian	C5	Waynesville		IN	Ripley	Friendship	C5	38.98339	-85.1666227
432	Richmondian	C5	Waynesville		IN	Dearborn	Weisburg	C5	39.217960	-85.045940
433	Richmondian	C5	Whitewater		IN	Wayne	Richmond	C5	39.759790	-84.907490
434	Richmondian	C5	Whitewater	Saluda	OH	Highland	Lynchburg	C5	39.237222	-83.789167
435	Richmondian	C5	Liberty		IN	Franklin	Brookville	C5	39.341966	-84.953650
436	Richmondian	C5	Waynesville		OH	Warren	Ft. Ancient	C5	39.408016	-84.091450
437	Richmondian	C5	Waynesville		OH	Clinton	Clarksville	C5	39.415833	-83.990278
438	Richmondian	C5	Liberty		OH	Hamilton	Cincinnati	C5	39.580920	-84.751020
439	Richmondian	C5	Liberty		OH	Butler	Oxford	C5	39.499650	-84.718883
440	Richmondian	C5	Whitewater		OH	Adams	Dunkinsville	C5	38.859840	-83.501800
441	Richmondian	C5	Liberty		OH	Adams		C5	38.857500	-83.491650
442	Richmondian	C5	Waynesville		IN	Franklin	Hamburg	C5	39.397110	-85.234610
443	Richmondian	C5	Waynesville		OH	Clinton	Clarksville	C5	39.388820	-83.846750
444	Richmondian	C5	Liberty		IN	Union		C5	39.632680	-84.948900
445	Richmondian	C5	Waynesville	Blanchester	OH	Clinton	Blanchester	C5	39.238170	-84.022960
446	Richmondian	C5	Liberty		OH	Adams	Manchester	C5	38.688230	-83.609550
447	Richmondian	C5	Waynesville		OH	Warren	Oregonia	C5	39.451408	-84.096107
448	Richmondian	C5	Liberty		OH	Butler	Oxford	C5	39.507271	-84.745682
449	Richmondian	C5	Whitewater		OH	Preble	Camden	C5	39.627180	-84.664140
450	Richmondian	C5	Whitewater		OH	Clinton		C5	39.3894	-83.927
451	Richmondian	C5	Liberty		OH	Warren		C5	39.48027	-84.5712
452	Richmondian	C5	Waynesville		OH	Warren		C5	39.47997	-84.04893
453	Richmondian	C5	Waynesville		OH	Warren		C5	39.48127	-84.6817
454	Richmondian	C5	Liberty		IN	Union		C5	39.48798	-84.94867
455	Richmondian	C5	Liberty		IN	Jefferson		C5	38.77827	-85.36523

Appendix 1. Species distribution data

399	Caesar Creek Spillway
400	Cherry Fork
401	Cliff Creek N of Brownsville
402	Clifty Creek, Clifty Falls State Park
403	Collins Creek at B&O RR
404	Cowans Ck
405	Crk 3/4 mi N. of Mixerville
406	Cut 17, Weisburg
407	Devil's Backbone on Rt 725, one mile E. of Camden
408	Devil's Backbone, Paint Creek. NW1/4 Sec16, T6N, R2E.
409	Dodges Ck
410	Dodges Ck, .5mi N of Oxford
411	Dry Fork N of Miltonville
412	Exp above rd W of Waynesville
413	Flat Fork of Ceasars Ck
414	Garr Hill
415	Grace Run, Harshaville area
416	Harkers Run area
417	Harpers Branch
418	L. 4mi Ck, College Corner
419	Madison-421N
420	Miami U excavation for Ice Rink, dump piles
421	Mound Rd., Just NE of Harveysburg
422	MU Botanical Gardens
423	N of RR, Woods-McGonigle
424	N. of Brookville, Brookville North cut on Rt. 101
425	Oxford
426	Rd. cut on US27 south of town. Sec17, T13N, R1W.
427	Road cut 1.9 mi. S. of Camden on US 127. Sec28, T6N, R2E
428	Road cut 2.9mi S. of Camden. Sec33, T6N, R2E.
429	Road cut on US127. 4.5mi S. of Camden. Sec4. T5N, R2E.
430	Road west of Waynesville. The exposures above the road.
431	Rost Run
432	RR cut 14
433	S.of Richmond, Big roadcut on Rt 27
434	Section along bridge
435	South Gate Hill
436	Specified locality not recorded
437	Stony Hollow, W. of Clarksville
438	Stream exposures on Little Four Mile Creek, 1000 ft west of intersection w/loop road in Hueston Woods State Park (greater Cincy)
439	Talawanda Cr at County Line and Dodges Cr. N of Oxford
440	Treber's Run and its tributaries SW of Dunkinville
441	Treber's Run SW of Dunkinville
442	Trib of Big Salt Ck
443	Trib of Cowans Creek
444	Trib of Silver Cr. 1mi W of Lib
445	Upper Stonelick Ck, near Blanchester
446	
447	
448	
449	
450	Cuts along sides of emergency spillway from Cowan Lake, immediately west of Ohio State Route 730
451	Exposures along walls and floor of emergency spillway for Caesar Creek Lake
452	Multiple streamside exposures along Flat Fork, upstream from where stream empties into Caesar Creek Lake
453	Multiple streamside exposures along unnamed stream that flows west of end of emergency spillway for Caesar Creek Lake and northward into Caesar Creek
454	Roadcut on both sides of Indiana State Route 101, 5.0 miles north of Brookville
455	Roadcut on east side of US Route 421, 3.1 miles north of of intersection with Indiana State Route 56 in Madison

Appendix 1. Species distribution data

456	Rhynchonellida	Rhynchotrematidae	<i>Hiscobeccus</i>	<i>capax</i>	Holland and Patzkowsky 2007		72519
457	Rhynchonellida	Rhynchotrematidae	<i>Hiscobeccus</i>	<i>capax</i>	Holland and Patzkowsky 2007		72690
458	Rhynchonellida	Rhynchotrematidae	<i>Hiscobeccus</i>	<i>capax</i>	Holland and Patzkowsky 2007		72880
459	Rhynchonellida	Rhynchotrematidae	<i>Hiscobeccus</i>	<i>capax</i>	MUGM	25583	3.28A5A
460	Rhynchonellida	Rhynchotrematidae	<i>Hiscobeccus</i>	<i>capax</i>	MUGM	25486	1.1O2
461	Rhynchonellida	Rhynchotrematidae	<i>Hiscobeccus</i>	<i>capax</i>	CiMNH	28397	
462	Rhynchonellida	Rhynchotrematidae	<i>Hiscobeccus</i>	<i>capax</i>	MUGM	25571	2.6G5A
463	Rhynchonellida	Rhynchotrematidae	<i>Hiscobeccus</i>	<i>capax</i>	CiMNH	5402	
464	Rhynchonellida	Rhynchotrematidae	<i>Hiscobeccus</i>	<i>capax</i>	MUGM	25562	2.60E+04
465	Rhynchonellida	Rhynchotrematidae	<i>Hiscobeccus</i>	<i>capax</i>	MUGM	25479	1.1G9
466	Rhynchonellida	Rhynchotrematidae	<i>Hiscobeccus</i>	<i>capax</i>	MUGM	25508	1.3A4
467	Rhynchonellida	Rhynchotrematidae	<i>Hiscobeccus</i>	<i>capax</i>	MUGM	15709	
468	Rhynchonellida	Rhynchotrematidae	<i>Hiscobeccus</i>	<i>capax</i>	MUGM	25592	3.28A3
469	Rhynchonellida	Rhynchotrematidae	<i>Hiscobeccus</i>	<i>capax</i>	CiMNH	6237	
470	Rhynchonellida	Rhynchotrematidae	<i>Hiscobeccus</i>	<i>capax</i>	MUGM	25503	1.3C3
471	Rhynchonellida	Rhynchotrematidae	<i>Hiscobeccus</i>	<i>capax</i>	MUGM	25578	2.6G5C
472	Rhynchonellida	Rhynchotrematidae	<i>Hiscobeccus</i>	<i>capax</i>	MUGM	25579	2.6G7
473	Rhynchonellida	Rhynchotrematidae	<i>Hiscobeccus</i>	<i>capax</i>	Holland and Patzkowsky 2007		72454
474	Strophomenida	Strophomenidae	<i>Holtedahlina</i>	<i>sulcata</i>	CiMNH	21349	
475	Strophomenida	Strophomenidae	<i>Holtedahlina</i>	<i>sulcata</i>	Holland and Patzkowsky 2007		72863
476	Strophomenida	Strophomenidae	<i>Holtedahlina</i>	<i>sulcata</i>	Holland and Patzkowsky 2007		72579
477	Strophomenida	Strophomenidae	<i>Holtedahlina</i>	<i>sulcata</i>	Holland and Patzkowsky 2007		72627
478	Strophomenida	Strophomenidae	<i>Holtedahlina</i>	<i>sulcata</i>	Holland and Patzkowsky 2007		72442
479	Strophomenida	Strophomenidae	<i>Holtedahlina</i>	<i>sulcata</i>	Holland and Patzkowsky 2007		73091
480	Strophomenida	Strophomenidae	<i>Holtedahlina</i>	<i>sulcata</i>	Holland and Patzkowsky 2007		72502
481	Strophomenida	Strophomenidae	<i>Holtedahlina</i>	<i>sulcata</i>	Holland and Patzkowsky 2007		72949
482	Strophomenida	Strophomenidae	<i>Holtedahlina</i>	<i>sulcata</i>	Holland and Patzkowsky 2007		72690
483	Strophomenida	Strophomenidae	<i>Holtedahlina</i>	<i>sulcata</i>	Holland and Patzkowsky 2007		72614
484	Strophomenida	Strophomenidae	<i>Holtedahlina</i>	<i>sulcata</i>	Holland and Patzkowsky 2007		73111
485	Strophomenida	Strophomenidae	<i>Holtedahlina</i>	<i>sulcata</i>	Holland and Patzkowsky 2007		72952
486	Strophomenida	Strophomenidae	<i>Holtedahlina</i>	<i>sulcata</i>	Holland and Patzkowsky 2007		72632
487	Strophomenida	Strophomenidae	<i>Holtedahlina</i>	<i>sulcata</i>	Holland and Patzkowsky 2007		72455
488	Rhynchonellida	Rhynchotrematidae	<i>Lepidocyclus</i>	<i>perlamellosum</i>	CiMNH	27703	
489	Rhynchonellida	Rhynchotrematidae	<i>Lepidocyclus</i>	<i>perlamellosum</i>	Field		OH-WA-0001
490	Rhynchonellida	Rhynchotrematidae	<i>Lepidocyclus</i>	<i>perlamellosum</i>	Field		IN-FR-0003
491	Rhynchonellida	Rhynchotrematidae	<i>Lepidocyclus</i>	<i>perlamellosum</i>	Field		IN-JE-0001
492	Rhynchonellida	Rhynchotrematidae	<i>Lepidocyclus</i>	<i>perlamellosum</i>	Field		IN-FR-0005
493	Rhynchonellida	Rhynchotrematidae	<i>Lepidocyclus</i>	<i>perlamellosum</i>	MUGM	11219	
494	Rhynchonellida	Rhynchotrematidae	<i>Lepidocyclus</i>	<i>perlamellosum</i>	MUGM	11387	
495	Rhynchonellida	Rhynchotrematidae	<i>Lepidocyclus</i>	<i>perlamellosum</i>	MUGM	11220	
496	Rhynchonellida	Rhynchotrematidae	<i>Lepidocyclus</i>	<i>perlamellosum</i>	MUGM	11391	
497	Rhynchonellida	Rhynchotrematidae	<i>Lepidocyclus</i>	<i>perlamellosum</i>	MUGM	11221	
498	Rhynchonellida	Rhynchotrematidae	<i>Lepidocyclus</i>	<i>perlamellosum</i>	CiMNH	24567	
499	Strophomenida	Rafinesquinidae	<i>Leptaena</i>	<i>gibbosa</i>	CiMNH	19440	
500	Strophomenida	Rafinesquinidae	<i>Leptaena</i>	<i>gibbosa</i>	CiMNH	18534	
501	Strophomenida	Rafinesquinidae	<i>Leptaena</i>	<i>gibbosa</i>	CiMNH		
502	Strophomenida	Rafinesquinidae	<i>Leptaena</i>	<i>richmondensis</i>	CiMNH	28421	
503	Strophomenida	Rafinesquinidae	<i>Leptaena</i>	<i>richmondensis</i>	CiMNH	28638	
504	Strophomenida	Rafinesquinidae	<i>Leptaena</i>	<i>richmondensis</i>	CiMNH	18498	
505	Strophomenida	Rafinesquinidae	<i>Leptaena</i>	<i>richmondensis</i>	Holland and Patzkowsky 2007		73108
506	Strophomenida	Rafinesquinidae	<i>Leptaena</i>	<i>richmondensis</i>	CiMNH	18847	
507	Strophomenida	Rafinesquinidae	<i>Leptaena</i>	<i>richmondensis</i>	CiMNH	P50009	
508	Strophomenida	Rafinesquinidae	<i>Leptaena</i>	<i>richmondensis</i>	CiMNH	21346	
509	Strophomenida	Rafinesquinidae	<i>Leptaena</i>	<i>richmondensis</i>	CiMNH		
510	Strophomenida	Rafinesquinidae	<i>Leptaena</i>	<i>richmondensis</i>	CiMNH	37289	
511	Strophomenida	Rafinesquinidae	<i>Leptaena</i>	<i>richmondensis</i>	CiMNH	33441	
512	Strophomenida	Rafinesquinidae	<i>Leptaena</i>	<i>richmondensis</i>	CiMNH	18496	

Appendix 1. Species distribution data

456	Richmondian	C5	Liberty		IN	Franklin		C5	39.3425	-84.95358
457	Richmondian	C5	Bardstown		KY	Nelson		C5	37.76737	-85.35557
458	Richmondian	C5	Waynesville		OH	Warren		C5	39.48693	-84.6558
459	Richmondian	C6	Elkhorn		KY	Bullitt		C6	38.026667	-85.526944
460	Richmondian	C6	Whitewater	Upper Whitewater	OH	Butler	Oxford	C6	39.519380	-84.760240
461	Richmondian	C6	Elkhorn		IN	Ripley	Versailles	C6	39.080440	-85.249730
462	Richmondian	C6	Elkhorn		IN	Franklin	Hamburg	C6	39.379670	-85.250880
463	Richmondian	C6	Whitewater	Upper Whitewater	OH	Preble	Camden	C6	39.627020	-84.664720
464	Richmondian	C6	Elkhorn		IN	Franklin	Oldenburg	C6	39.339649	-85.204193
465	Richmondian	C6	Whitewater	Upper Whitewater	IN	Wayne	Richmond	C6	39.828870	-84.890290
466	Richmondian	C6	Whitewater	Upper Whitewater	OH	Preble	Hamilton	C6	39.617230	-84.645930
467	Richmondian	C6	Elkhorn		IN	Franklin	Hamburg	C6	39.379770	-85.251360
468	Richmondian	C6	Elkhorn		KY	Bullitt		C6	38.026667	-85.526944
469	Richmondian	C6	Elkhorn		IN	Wayne	Richmond	C6	39.759790	-84.907490
470	Richmondian	C6	Whitewater	Upper Whitewater	OH	Preble	Camden	C6	39.627018	-84.663783
471	Richmondian	C6	Elkhorn		IN	Franklin	Hamburg	C6	39.380700	-85.250890
472	Richmondian	C6	Elkhorn		IN	Franklin	Hamburg	C6	39.380700	-85.250890
473	Richmondian	C6	Whitewater	Upper	IN	Union		C6	39.48798	-84.94867
474	Richmondian	C5	Waynesville	Blanchester	OH	Clinton	Blanchester	C5	39.238170	-84.022960
475	Richmondian	C5	Whitewater		OH	Clinton		C5	39.3894	-83.927
476	Richmondian	C5	Whitewater	Lower	OH	Warren		C5	39.48027	-84.5712
477	Richmondian	C5	Whitewater	Lower	OH	Greene		C5	39.79568	-84.08913
478	Richmondian	C5	Liberty		IN	Union		C5	39.48798	-84.94867
479	Richmondian	C5	Liberty		IN	Jefferson		C5	38.77827	-85.36523
480	Richmondian	C5	Waynesville	Blanchester	IN	Franklin		C5	39.3425	-84.95358
481	Richmondian	C5	Whitewater		OH	Adams		C5	38.92683	-83.5214
482	Richmondian	C5	Bardstown		KY	Nelson		C5	37.76737	-85.35557
483	Richmondian	C5	Waynesville		OH	Warren		C5	39.54853	-84.05233
484	Richmondian	C5	Bull Fork		KY	Mason		C5	38.59637	-83.71927
485	Richmondian	C5	Whitewater		OH	Adams		C5	38.8276	-83.50535
486	Richmondian	C6	Whitewater	Upper	OH	Greene		C6	39.79568	-84.08913
487	Richmondian	C6	Whitewater	Upper	IN	Wayne		C6	39.78728	-84.90183
488	Richmondian	C5	Waynesville	Blanchester	IN	Dearborn	Weisburg	C5	39.217960	-85.045940
489	Richmondian	C5	Waynesville		OH	Warren		C5	39.477600	-84.063010
490	Richmondian	C5	Liberty		IN	Franklin	Brookville	C5	39.480383	-84.948633
491	Richmondian	C5	Liberty		IN	Jefferson	Madison	C5	38.775880	-85.363800
492	Richmondian	C5	Liberty		IN	Franklin	Brookville	C5	39.341966	-84.953650
493	Richmondian	C5	Waynesville		OH	Brown	Fayetteville	C5	39.186600	-83.932590
494	Richmondian	C5	Waynesville		IN	Dearborn	Weisburg	C5	39.215931	-85.045151
495	Richmondian	C5	Waynesville		OH	Warren	Oregonia	C5	39.451408	-84.096107
496	Richmondian	C5	Whitewater		OH	Preble	Camden	C5	39.627180	-84.664140
497	Richmondian	C5	Waynesville		OH	Montgomery	Miamisburg	C5	39.642460	-84.284851
498	Richmondian	C5	Waynesville		OH	Clinton	Clarksville	C5	39.406140	-83.987000
499	Edenian	C1	Kope	Economy Beds	KY	Kenton	Bromley	C1	39.077222	-84.577778
500	Edenian	C1	Kope	Economy Beds	OH	Hamilton		C1	39.093333	-84.574167
501	Edenian	C1	Kope	Fulton Mbr	IN	Wayne	Richmond	C1	39.828870	-84.890290
502	Richmondian	C4	Arnheim		IN	Dearborn	Weisburg	C4	39.217960	-85.045940
503	Richmondian	C4	Arnheim		OH	Butler	Maud	C4	39.345500	-84.386500
504	Richmondian	C4	Arnheim		OH	Hamilton	Bridgetown	C4	39.153190	-84.637300
505	Richmondian	C4	Sunset		KY	Mason		C4	38.607	-83.76752
506	Richmondian	C5	Whitewater		OH	Preble	Camden	C5	39.628910	-84.648690
507	Richmondian	C5	Waynesville		IN	Dearborn	St. Leon	C5	39.283333	-84.959167
508	Richmondian	C5	Waynesville		IN	Ripley	Versailles	C5	39.080590	-85.229940
509	Richmondian	C5	Waynesville		OH	Brown	Mt. Orab	C5	39.027450	-83.919740
510	Richmondian	C5	Waynesville		OH	Butler	Oxford	C5	39.497500	-84.759722
511	Richmondian	C5	Whitewater	Lebanon beds	OH	Warren	Lebanon	C5	39.435220	-84.202900
512	Richmondian	C5	Liberty		IN	Franklin	Oldenburg	C5	39.339700	-85.204320

Appendix 1. Species distribution data

456	Roadcut on Indiana State Route 1, 1.6 miles to 2.1 miles south of intersection with US Route 52 at Cedar Grove
457	Roadcut on west side of US Route 150, 0.6 miles west of Nelson / Washington county line
458	Streamside exposures along creek that empties immediately below dam outlet for Caesar Creek Lake and that empties into Caesar's Creek from north side
459	Along Bardstown Pk, S. Mt Wash.
460	Coral Banks in NW Oxford
461	cut along rd at Cedar Cr, Versailles
462	Cut along road W. of Hamburg
463	Devil's Backbone Ck, Camden
464	Harpers Branch N of Oldenburg
465	New Richmond
466	Paint Crk. Above Devils Backbone
467	Power station west of Hamburg
468	Sec along Bardstown Pk S Mt. Wash
469	Short Ck, 2 mi S of Richmond
470	Trib Paint Cr
471	West of Hamburg
472	
473	Roadcut on both sides of Indiana State Route 101, 5.0 miles north of Brookville
474	Upper Stonelick and Hunter Ck, near Blanchester
475	Cuts along sides of emergency spillway from Cowan Lake, immediately west of Ohio State Route 730
476	Exposures along walls and floor of emergency spillway for Caesar Creek Lake
477	Railroad cut on south side of railroad, immediately north of the Wright Brothers Memorial in Fairborn
478	Roadcut on both sides of Indiana State Route 101, 5.0 miles north of Brookville
479	Roadcut on east side of US Route 421, 3.1 miles north of of intersection with Indiana State Route 56 in Madison
480	Roadcut on Indiana State Route 1, 1.6 miles to 2.1 miles south of intersection with US Route 52 at Cedar Grove
481	Roadcut on south side of Ohio State Route 32, 0.3 miles east of intersection with Burnt Cabin Road
482	Roadcut on west side of US Route 150, 0.6 miles west of Nelson / Washington county line
483	Roadcut on west side of US Route 42, 1.2 miles north of Main Street in Waynesville
484	Roadcuts on both sides of AA highway (Kentucky State Route 9), 2.4 miles east of intersection with Kentucky State Route 11
485	Roadcuts on both sides of Ohio State Route 41, 2.8 miles north of intersection with Ohio State Route 125
486	Railroad cut on south side of railroad, immediately north of the Wright Brothers Memorial in Fairborn
487	Roadcuts on both sides of US Route 27, 0.8 miles north of intersection with Beelor Road
488	Big 4 RR cuts 14-15, Weisburg
489	Caesar Creek Spillway
490	Garr Hill
491	Madison-421N
492	South Gate Hill
493	
494	
495	
496	
497	
498	Stoney Hollow, Clarksville
499	1 Mi W of Bromley, KY
500	Bold Face Creek
501	New Richmond
502	Big 4 RR cut 12, Weisburg
503	Big 4 RR cut, 1 mi below Maud
504	C&O RR cut, Bridgetown
505	Roadcut on both sides of AA highway (Kentucky State Route 9), 0.4 miles west of intersection with Kentucky State Route 11
506	Camden
507	Cut on Rt. 1, N of St. Leon
508	Fallen Timbers Ck, Versailles
509	Flat Run, Mt. Orab
510	1 mi SW of Oxford
511	Lebanon
512	Oldenburg

Appendix 1. Species distribution data

513	Strophomenida	Rafinesquinidae	<i>Leptaena</i>	<i>richmondensis</i>	CiMNH		
514	Strophomenida	Rafinesquinidae	<i>Leptaena</i>	<i>richmondensis</i>	CiMNH	26708	
515	Strophomenida	Rafinesquinidae	<i>Leptaena</i>	<i>richmondensis</i>	CiMNH	28341	
516	Strophomenida	Rafinesquinidae	<i>Leptaena</i>	<i>richmondensis</i>	CiMNH	28643	
517	Strophomenida	Rafinesquinidae	<i>Leptaena</i>	<i>richmondensis</i>	CiMNH	31522	
518	Strophomenida	Rafinesquinidae	<i>Leptaena</i>	<i>richmondensis</i>	Holland and Patzkowsky 2007		72548
519	Strophomenida	Rafinesquinidae	<i>Leptaena</i>	<i>richmondensis</i>	Holland and Patzkowsky 2007		72877
520	Strophomenida	Rafinesquinidae	<i>Leptaena</i>	<i>richmondensis</i>	Holland and Patzkowsky 2007		73087
521	Strophomenida	Rafinesquinidae	<i>Leptaena</i>	<i>richmondensis</i>	Holland and Patzkowsky 2007		72505
522	Strophomenida	Rafinesquinidae	<i>Leptaena</i>	<i>richmondensis</i>	Holland and Patzkowsky 2007		72621
523	Strophomenida	Rafinesquinidae	<i>Leptaena</i>	<i>richmondensis</i>	Holland and Patzkowsky 2007		72879
524	Strophomenida	Rafinesquinidae	<i>Leptaena</i>	<i>richmondensis</i>	CiMNH	28484	
525	Strophomenida	Rafinesquinidae	<i>Leptaena</i>	<i>richmondensis</i>	CiMNH	23301	
526	Strophomenida	Rafinesquinidae	<i>Leptaena</i>	<i>richmondensis</i>	Holland and Patzkowsky 2007		72455
527	Strophomenida	Rafinesquinidae	<i>Leptaena</i>	<i>richmondensis</i>	Field		IN-FR-0001
528	Strophomenida	Rafinesquinidae	<i>Leptaena</i>	<i>richmondensis</i>	Field		OH-WA-0001
529	Strophomenida	Rafinesquinidae	<i>Leptaena</i>	<i>richmondensis</i>	Field		IN-FR-0003
530	Strophomenida	Rafinesquinidae	<i>Leptaena</i>	<i>richmondensis</i>	Field		IN-JE-0001
531	Strophomenida	Rafinesquinidae	<i>Leptaena</i>	<i>richmondensis</i>	Field		IN-FR-0005
532	Orthida	Plaesiomyidae	<i>Plaesiomys</i>	<i>subquadrata</i>	CiMNH	27721	
533	Orthida	Plaesiomyidae	<i>Plaesiomys</i>	<i>subquadrata</i>	MUGM	15572	
534	Orthida	Plaesiomyidae	<i>Plaesiomys</i>	<i>subquadrata</i>	MUGM	10508	2.9B4
535	Orthida	Plaesiomyidae	<i>Plaesiomys</i>	<i>subquadrata</i>	MUGM	15774	
536	Orthida	Plaesiomyidae	<i>Plaesiomys</i>	<i>subquadrata</i>	CiMNH	28588	
537	Orthida	Plaesiomyidae	<i>Plaesiomys</i>	<i>subquadrata</i>	CiMNH	28675	
538	Orthida	Plaesiomyidae	<i>Plaesiomys</i>	<i>subquadrata</i>	MUGM	22932	1.13D3
539	Orthida	Plaesiomyidae	<i>Plaesiomys</i>	<i>subquadrata</i>	CiMNH	53994	
540	Orthida	Plaesiomyidae	<i>Plaesiomys</i>	<i>subquadrata</i>	MUGM	15854	
541	Orthida	Plaesiomyidae	<i>Plaesiomys</i>	<i>subquadrata</i>	MUGM	14495	1.1A7
542	Orthida	Plaesiomyidae	<i>Plaesiomys</i>	<i>subquadrata</i>	OSU	22992	
543	Orthida	Plaesiomyidae	<i>Plaesiomys</i>	<i>subquadrata</i>	OSU	22989	
544	Orthida	Plaesiomyidae	<i>Plaesiomys</i>	<i>subquadrata</i>	OSU	14497	
545	Orthida	Plaesiomyidae	<i>Plaesiomys</i>	<i>subquadrata</i>	OSU	22994	
546	Orthida	Plaesiomyidae	<i>Plaesiomys</i>	<i>subquadrata</i>	MUGM	5056	
547	Orthida	Plaesiomyidae	<i>Plaesiomys</i>	<i>subquadrata</i>	CiMNH	21317	
548	Orthida	Plaesiomyidae	<i>Plaesiomys</i>	<i>subquadrata</i>	MUGM	10511	1.38C4
549	Orthida	Plaesiomyidae	<i>Plaesiomys</i>	<i>subquadrata</i>	MUGM	14499	1.54B9
550	Orthida	Plaesiomyidae	<i>Plaesiomys</i>	<i>subquadrata</i>	CiMNH	1.57C-65	
551	Orthida	Plaesiomyidae	<i>Plaesiomys</i>	<i>subquadrata</i>	MUGM	22990	1.9A3
552	Orthida	Plaesiomyidae	<i>Plaesiomys</i>	<i>subquadrata</i>	OSU	22990	
553	Orthida	Plaesiomyidae	<i>Plaesiomys</i>	<i>subquadrata</i>	CiMNH	27567	
554	Orthida	Plaesiomyidae	<i>Plaesiomys</i>	<i>subquadrata</i>	MUGM	22941	1.1G7
555	Orthida	Plaesiomyidae	<i>Plaesiomys</i>	<i>subquadrata</i>	OSU	15774	
556	Orthida	Plaesiomyidae	<i>Plaesiomys</i>	<i>subquadrata</i>	OSU	22941	
557	Orthida	Plaesiomyidae	<i>Plaesiomys</i>	<i>subquadrata</i>	Field		
558	Orthida	Plaesiomyidae	<i>Plaesiomys</i>	<i>subquadrata</i>	MUGM	22991	1.3B5
559	Orthida	Plaesiomyidae	<i>Plaesiomys</i>	<i>subquadrata</i>	CiMNH	18485	
560	Orthida	Plaesiomyidae	<i>Plaesiomys</i>	<i>subquadrata</i>	MUGM	22981	2.13D
561	Orthida	Plaesiomyidae	<i>Plaesiomys</i>	<i>subquadrata</i>	OSU	22936	
562	Orthida	Plaesiomyidae	<i>Plaesiomys</i>	<i>subquadrata</i>	MUGM	22940	1.1V3
563	Orthida	Plaesiomyidae	<i>Plaesiomys</i>	<i>subquadrata</i>	MUGM	22939	1.51B6
564	Orthida	Plaesiomyidae	<i>Plaesiomys</i>	<i>subquadrata</i>	MUGM	22993	2.2A2
565	Orthida	Plaesiomyidae	<i>Plaesiomys</i>	<i>subquadrata</i>	OSU	10510	
566	Orthida	Plaesiomyidae	<i>Plaesiomys</i>	<i>subquadrata</i>	MUGM	22937	1.16H
567	Orthida	Plaesiomyidae	<i>Plaesiomys</i>	<i>subquadrata</i>	CiMNH	21371	
568	Orthida	Plaesiomyidae	<i>Plaesiomys</i>	<i>subquadrata</i>	MUGM	22950	2.6G5C
569	Orthida	Plaesiomyidae	<i>Plaesiomys</i>	<i>subquadrata</i>	MUGM	19525	

Appendix 1. Species distribution data

513	Richmondian	C5	Liberty		OH	Butler	Oxford	C5	39.506870	-84.745100
514	Richmondian	C5	Waynesville		OH	Warren	Ft. Ancient	C5	39.389330	-84.094350
515	Richmondian	C5	Waynesville	Blanchester	OH	Clinton	Blanchester	C5	39.238170	-84.022960
516	Richmondian	C5	Waynesville	Blanchester	IN	Ripley	Versailles	C5	39.080720	-85.250430
517	Richmondian	C5	Waynesville	Ft. Ancient	OH	Brown	Russellville	C5	38.866390	-83.786800
518	Richmondian	C5	Waynesville		OH	Warren		C5	39.48027	-84.5712
519	Richmondian	C5	Waynesville		OH	Warren		C5	39.48127	-84.6817
520	Richmondian	C5	Liberty		IN	Jefferson		C5	38.77827	-85.36523
521	Richmondian	C5	Waynesville		IN	Franklin		C5	39.3425	-84.95358
522	Richmondian	C5	Waynesville		OH	Warren		C5	39.54853	-84.05233
523	Richmondian	C5	Waynesville		OH	Warren		C5	39.48693	-84.6558
524	Richmondian	C6	Elkhorn		IN	Ripley	Versailles	C6	39.080440	-85.249730
525	Richmondian	C6	Elkhorn		IN	Wayne	Richmond	C6	39.771840	-84.879170
526	Richmondian	C6	Whitewater	Upper	IN	Wayne		C6	39.78728	-84.90183
527	Richmondian	C5	Liberty		IN	Franklin	Brookville	C5	39.437950	-84.987400
528	Richmondian	C5	Waynesville		OH	Warren		C5	39.477600	-84.063010
529	Richmondian	C5	Liberty		IN	Franklin	Brookville	C5	39.480383	-84.948633
530	Richmondian	C5	Liberty		IN	Jefferson	Madison	C5	38.775880	-85.363800
531	Richmondian	C5	Waynesville		IN	Franklin	Brookville	C5	39.341966	-84.953650
532	Richmondian	C5	Liberty		IN	Dearborn	Weisburg	C5	39.217960	-85.045940
533	Richmondian	C5	Whitewater		IN	Wayne	Richmond	C5	37.748466	-84.297716
534	Richmondian	C5	Liberty		IN	Ripley	Versailles	C5	39.081030	-85.251026
535	Richmondian	C5	Liberty		OH	Warren		C5	39.480860	-84.047570
536	Richmondian	C5	Liberty		OH	Preble	Camden	C5	39.628910	-84.648690
537	Richmondian	C5	Waynesville		IN	Dearborn	Moore Hill	C5	39.071430	-85.072910
538	Richmondian	C5	Whitewater	Lower Whitewater	OH	Butler	Middletown	C5	39.514751	-84.398140
539	Richmondian	C5	Whitewater		OH	Preble	Camden	C5	39.627020	-84.664720
540	Richmondian	C5	Whitewater		OH	Preble	Camden	C5	39.627018	-84.663783
541	Richmondian	C5	Whitewater	Lower Whitewater	OH	Butler	Oxford	C5	39.534100	-84.737760
542	Richmondian	C5	Liberty		OH	Butler	Oxford	C5	39.506920	-84.745150
543	Richmondian	C5	Whitewater		IN	Wayne		C5	39.607780	-84.968410
544	Richmondian	C5	Whitewater		OH	Adams	Sardinia	C5	38.937222	-83.639167
545	Richmondian	C5	Whitewater		IN	Wayne	Richmond	C5	39.771840	-84.879170
546	Richmondian	C5	Liberty		OH	Preble	Camden	C5	39.627018	-84.663783
547	Richmondian	C5	Waynesville		OH	Warren	Oregonia	C5	39.479790	-84.043650
548	Richmondian	C5	Liberty		OH	Warren	Harveysburg	C5	39.483056	-84.057500
549	Richmondian	C5	Whitewater	Lower Whitewater	OH	Adams	Harshville	C5	38.906111	-83.553889
550	Richmondian	C5	Whitewater		OH	Montgomery	Centerville	C5	39.683948	-84.230496
551	Richmondian	C5	Whitewater		OH	Montgomery	Dayton	C5	39.758770	-84.191658
552	Richmondian	C5	Whitewater		OH	Montgomery	Dayton	C5	39.769120	-84.174500
553	Richmondian	C5	Liberty		OH	Butler	Oxford	C5	39.582890	-84.758110
554	Richmondian	C5	Whitewater	Lower Whitewater	OH	Preble	Oxford	C5	39.631570	-84.749928
555	Richmondian	C5	Liberty		OH	Warren	Waynesville	C5	39.509210	-84.014350
556	Richmondian	C5	Whitewater	Lower Whitewater	IN	Wayne	Richmond	C5	39.828870	-84.890290
557	Richmondian	C5	Liberty		KY	Boyle		C5	37.661300	-85.159400
558	Richmondian	C5	Whitewater	Saluda	OH	Preble	Hamilton	C5	39.617230	-84.645930
559	Richmondian	C5	Whitewater		IN	Wayne	Richmond	C5	39.828760	-84.890320
560	Richmondian	C5	Waynesville		IN	Dearborn	Weisburg	C5	39.215931	-85.045151
561	Richmondian	C5	Whitewater	Lower Whitewater	OH	Preble	Talawanda Springs	C5	39.578900	-84.803760
562	Richmondian	C5	Liberty		OH	Butler	Oxford	C5	39.499650	-84.718883
563	Richmondian	C5	Whitewater		OH	Adams	Dunkinsville	C5	38.859840	-83.501800
564	Richmondian	C5	Liberty		IN	Union		C5	39.632680	-84.948900
565	Richmondian	C5	Liberty	Liberty	IN	Union	Liberty	C5	39.640980	-84.941550
566	Richmondian	C5	Waynesville		OH	Butler	Hamilton	C5	39.400300	-84.561680
567	Richmondian	C5	Waynesville	Blanchester	IN	Ripley	Versailles	C5	39.080720	-85.250430
568	Richmondian	C5	Whitewater		IN	Franklin	Hamburg	C5	39.380700	-85.250890
569	Richmondian	C5	Liberty		IN	Dearborn	Weisburg	C5	39.215931	-85.045151

Appendix 1. Species distribution data

513	Oxford
514	Stoney Run Ck, 2 mi ESE of Ft. Ancient
515	Upper Stonelick Ck, near Blanchester
516	Wash bank, Versailles
517	
518	Exposures along walls and floor of emergency spillway for Caesar Creek Lake
519	Multiple streamside exposures along unnamed stream that flows west of end of emergency spillway for Caesar Creek Lake and northward into Caesar Creek
520	Roadcut on east side of US Route 421, 3.1 miles north of intersection with Indiana State Route 56 in Madison
521	Roadcut on Indiana State Route 1, 1.6 miles to 2.1 miles south of intersection with US Route 52 at Cedar Grove
522	Roadcut on west side of US Route 42, 1.2 miles north of Main Street in Waynesville
523	Streamside exposures along creek that empties immediately below dam outlet for Caesar Creek Lake and that empties into Caesar's Creek from north side
524	cuts along road at Cedar Creek, Versailles
525	Elkhorn Creek, Richmond
526	Roadcuts on both sides of US Route 27, 0.8 miles north of intersection with Beelor Road
527	Bon Well Hill
528	Caesar Creek Spillway
529	Garr Hill
530	Madison-421N
531	South Gate Hill
532	Big 4 R.R. cut 15
533	Big cut S on Rt 27
534	Branch of Cedar Ck flowing in from N, just N of Versailles
535	Caesars Creek Emergency Spillway
536	Camden
537	Cold Springs
538	Creek 1.25mi N of W Middletown
539	Devil's Backbone
540	Devil's Backbone. Rt. 725 2mi W of Camden
541	Dodges Cr, 1/2 mi N of Oxford
542	Dodges Creek, N of Oxford
543	East side of Whitewater Ck
544	Elk Run, Winchester-Sardinia
545	Elkhorn Cr, 4-5 mi S of Richmond
546	First creed N of Rush Run
547	Flat Fork Cr.
548	Flat Fork of Ceasars Ck
549	Grace Run, Harshaville area
550	Holes Cr.
551	Huffman Dam
552	Huffman Dam, Dayton
553	Little 4 mile Creek
554	McDills Mills 9mi N of Oxford
555	near Waynesville, Oh Caesars Ck emergeny spillway
556	New Richmond
557	Perryville -1
558	Pt. ck. Above Devil's Backbone
559	Richmond
560	RR cut .5mi below Weisburg
561	Talawanda Ck at County Line
562	Talawanda Cr at County Line
563	Treber's Run and its tributaries SW of Dunkinville
564	Trib of Silver Cr. 1mi W of Lib
565	Trib of silver creek 1 mi W of Liberty
566	Two Mile Hill
567	Wash Bank, Cedar Cr.
568	West of Hamburg
569	

Appendix 1. Species distribution data

570	Orthida	Plaesiomysidae	<i>Plaesiomys</i>	<i>subquadrata</i>	CiMNH	PA93.20.60	
571	Orthida	Plaesiomysidae	<i>Plaesiomys</i>	<i>subquadrata</i>	MUGM	11516	
572	Orthida	Plaesiomysidae	<i>Plaesiomys</i>	<i>subquadrata</i>	MUGM	22992	1.1A6
573	Orthida	Plaesiomysidae	<i>Plaesiomys</i>	<i>subquadrata</i>	CiMNH	18363	
574	Orthida	Plaesiomysidae	<i>Plaesiomys</i>	<i>subquadrata</i>	MUGM	11515	
575	Orthida	Plaesiomysidae	<i>Plaesiomys</i>	<i>subquadrata</i>	MUGM	11514	
576	Orthida	Plaesiomysidae	<i>Plaesiomys</i>	<i>subquadrata</i>	MUGM	11520	
577	Orthida	Plaesiomysidae	<i>Plaesiomys</i>	<i>subquadrata</i>	Holland and Patzkowsky 2007		72868
578	Orthida	Plaesiomysidae	<i>Plaesiomys</i>	<i>subquadrata</i>	Holland and Patzkowsky 2007		72579
579	Orthida	Plaesiomysidae	<i>Plaesiomys</i>	<i>subquadrata</i>	Holland and Patzkowsky 2007		72882
580	Orthida	Plaesiomysidae	<i>Plaesiomys</i>	<i>subquadrata</i>	Holland and Patzkowsky 2007		72441
581	Orthida	Plaesiomysidae	<i>Plaesiomys</i>	<i>subquadrata</i>	Holland and Patzkowsky 2007		73095
582	Orthida	Plaesiomysidae	<i>Plaesiomys</i>	<i>subquadrata</i>	Holland and Patzkowsky 2007		72521
583	Orthida	Plaesiomysidae	<i>Plaesiomys</i>	<i>subquadrata</i>	Holland and Patzkowsky 2007		72691
584	Orthida	Plaesiomysidae	<i>Plaesiomys</i>	<i>subquadrata</i>	OSU	22986	
585	Orthida	Plaesiomysidae	<i>Plaesiomys</i>	<i>subquadrata</i>	CiMNH	18378	
586	Orthida	Plaesiomysidae	<i>Plaesiomys</i>	<i>subquadrata</i>	OSU	22999	
587	Orthida	Plaesiomysidae	<i>Plaesiomys</i>	<i>subquadrata</i>	OSU	22996	
588	Orthida	Plaesiomysidae	<i>Plaesiomys</i>	<i>subquadrata</i>	OSU	22949	
589	Orthida	Plaesiomysidae	<i>Plaesiomys</i>	<i>subquadrata</i>	MUGM	22948	2.6G7
590	Orthida	Plaesiomysidae	<i>Plaesiomys</i>	<i>subquadrata</i>	CiMNH	18380	
591	Orthida	Platystrophiidae	<i>Platystrophia</i>	<i>acutilirata</i>	MUGM	24088	
592	Orthida	Platystrophiidae	<i>Platystrophia</i>	<i>acutilirata</i>	MUGM	23081	1.3D5
593	Orthida	Platystrophiidae	<i>Platystrophia</i>	<i>acutilirata</i>	CiMNH	27702	
594	Orthida	Platystrophiidae	<i>Platystrophia</i>	<i>acutilirata</i>	CiMNH		
595	Orthida	Platystrophiidae	<i>Platystrophia</i>	<i>acutilirata</i>	CiMNH	21824	
596	Orthida	Platystrophiidae	<i>Platystrophia</i>	<i>acutilirata</i>	CiMNH		
597	Orthida	Platystrophiidae	<i>Platystrophia</i>	<i>acutilirata</i>	MUGM	23366	1.3G3
598	Orthida	Platystrophiidae	<i>Platystrophia</i>	<i>acutilirata</i>	MUGM	23376	1.430
599	Orthida	Platystrophiidae	<i>Platystrophia</i>	<i>acutilirata</i>	CiMNH	28667	
600	Orthida	Platystrophiidae	<i>Platystrophia</i>	<i>acutilirata</i>	MUGM	15965	
601	Orthida	Platystrophiidae	<i>Platystrophia</i>	<i>acutilirata</i>	MUGM	23168	
602	Orthida	Platystrophiidae	<i>Platystrophia</i>	<i>acutilirata</i>	MUGM	23385	2.1H7
603	Orthida	Platystrophiidae	<i>Platystrophia</i>	<i>acutilirata</i>	MUGM	23378	2.1A8
604	Orthida	Platystrophiidae	<i>Platystrophia</i>	<i>acutilirata</i>	CiMNH	21797	
605	Orthida	Platystrophiidae	<i>Platystrophia</i>	<i>acutilirata</i>	MUGM	23379	2.8A2
606	Orthida	Platystrophiidae	<i>Platystrophia</i>	<i>acutilirata</i>	MUGM	23346	1.38C6
607	Orthida	Platystrophiidae	<i>Platystrophia</i>	<i>acutilirata</i>	CiMNH	19371	
608	Orthida	Platystrophiidae	<i>Platystrophia</i>	<i>acutilirata</i>	MUGM	23214	
609	Orthida	Platystrophiidae	<i>Platystrophia</i>	<i>acutilirata</i>	MUGM	23290	
610	Orthida	Platystrophiidae	<i>Platystrophia</i>	<i>acutilirata</i>	CiMNH	12927	
611	Orthida	Platystrophiidae	<i>Platystrophia</i>	<i>acutilirata</i>	MUGM	23336	1.9A3
612	Orthida	Platystrophiidae	<i>Platystrophia</i>	<i>acutilirata</i>	CiMNH	33291	
613	Orthida	Platystrophiidae	<i>Platystrophia</i>	<i>acutilirata</i>	CiMNH	18237	
614	Orthida	Platystrophiidae	<i>Platystrophia</i>	<i>acutilirata</i>	MUGM	23080	1.1G8
615	Orthida	Platystrophiidae	<i>Platystrophia</i>	<i>acutilirata</i>	MUGM	23211	
616	Orthida	Platystrophiidae	<i>Platystrophia</i>	<i>acutilirata</i>	CiMNH		
617	Orthida	Platystrophiidae	<i>Platystrophia</i>	<i>acutilirata</i>	MUGM	6515	
618	Orthida	Platystrophiidae	<i>Platystrophia</i>	<i>acutilirata</i>	CiMNH	33544	
619	Orthida	Platystrophiidae	<i>Platystrophia</i>	<i>acutilirata</i>	CiMNH	27529	
620	Orthida	Platystrophiidae	<i>Platystrophia</i>	<i>acutilirata</i>	CiMNH	18273	
621	Orthida	Platystrophiidae	<i>Platystrophia</i>	<i>acutilirata</i>	MUGM	23298	
622	Orthida	Platystrophiidae	<i>Platystrophia</i>	<i>acutilirata</i>	CiMNH	28378	
623	Orthida	Platystrophiidae	<i>Platystrophia</i>	<i>acutilirata</i>	MUGM	23382	2.10E+02
624	Orthida	Platystrophiidae	<i>Platystrophia</i>	<i>acutilirata</i>	MUGM	23213	
625	Orthida	Platystrophiidae	<i>Platystrophia</i>	<i>acutilirata</i>	CiMNH	12925	
626	Orthida	Platystrophiidae	<i>Platystrophia</i>	<i>acutilirata</i>	MUGM	23134	

Appendix 1. Species distribution data

570	Richmondian	C5	Liberty	Liberty	OH	Warren	Morrow	C5	39.354420	-84.127220
571	Richmondian	C5	Liberty		OH	Warren	Oregonia	C5	39.451408	-84.096107
572	Richmondian	C5	Liberty		OH	Butler	Oxford	C5	39.507271	-84.745682
573	Richmondian	C5	Waynesville		OH	Warren	Edgewood	C5	39.545890	-84.136790
574	Richmondian	C5	Whitewater		OH	Preble	Camden	C5	39.627018	-84.663783
575	Richmondian	C5	Liberty		OH	Montgomery	Miamisburg	C5	39.642460	-84.284851
576	Richmondian	C5	Liberty		IN	Wayne	Richmond	C5	39.829060	-84.891563
577	Richmondian	C5	Whitewater		OH	Clinton		C5	39.3894	-83.927
578	Richmondian	C5	Whitewater	Lower	OH	Warren		C5	39.48027	-84.5712
579	Richmondian	C5	Liberty		OH	Warren		C5	39.47997	-84.04893
580	Richmondian	C5	Liberty		IN	Union		C5	39.48798	-84.94867
581	Richmondian	C5	Liberty		IN	Jefferson		C5	38.77827	-85.36523
582	Richmondian	C5	Liberty		IN	Franklin		C5	39.3425	-84.95358
583	Richmondian	C5	Bardstown		KY	Nelson		C5	37.76737	-85.35557
584	Richmondian	C6	Whitewater	Upper Whitewater	OH	Preble	Morning Sun	C6	39.591870	-84.741360
585	Richmondian	C6	Elkhorn		OH	Montgomery	Miamisburg	C6	39.642800	-84.286700
586	Richmondian	C6	Whitewater	Upper Whitewater	IN	Wayne	Richmond	C6	39.828870	-84.890290
587	Richmondian	C6	Whitewater	Upper Whitewater	OH	Preble	Camden	C6	39.617230	-84.645930
588	Richmondian	C6	Elkhorn		IN	Franklin	Hamburg	C6	39.380700	-85.250890
589	Richmondian	C6	Elkhorn		IN	Franklin	Hamburg	C6	39.380700	-85.250890
590	Richmondian	C5	Waynesville		IN	Ripley	Versailles	C5	39.071910	-85.251880
591	Richmondian	C5	Whitewater		IN	Wayne	Richmond	C5	37.748466	-84.297716
592	Richmondian	C5	Whitewater		OH	Preble		C5	39.654130	-84.647670
593	Richmondian	C5	Waynesville	Clarksville	IN	Dearborn	Weisburg	C5	39.217960	-85.045940
594	Richmondian	C5	Waynesville		OH	Clinton	Blanchester	C5	39.293110	-83.988880
595	Richmondian	C5	Whitewater		IN	Wayne	Boston	C5	39.741170	-84.851960
596	Richmondian	C5	Waynesville		OH	Preble	Camden	C5	39.628910	-84.648690
597	Richmondian	C5	Whitewater		OH	Preble	Fair Haven	C5	39.639440	-84.771900
598	Richmondian	C5	Waynesville		OH	Clinton	Clarksville	C5	39.301410	-83.981070
599	Richmondian	C5	Whitewater		OH	Preble	Camden	C5	39.627020	-84.664720
600	Richmondian	C5	Whitewater		OH	Preble	Camden	C5	39.627018	-84.663783
601	Richmondian	C5	Whitewater		OH	Preble	Camden	C5	39.627018	-84.663783
602	Richmondian	C5	Whitewater		IN	Wayne		C5	39.607780	-84.968410
603	Richmondian	C5	Whitewater		IN	Wayne	Richmond	C5	39.756610	-84.904790
604	Richmondian	C5	Whitewater		IN	Wayne	Richmond	C5	39.771840	-84.879170
605	Richmondian	C5	Whitewater		IN	Ripley	Osgood	C5	39.161396	-85.307667
606	Richmondian	C5	Whitewater	Lower Whitewater	OH	Warren		C5	39.480710	-84.046740
607	Richmondian	C5	Whitewater		OH	Butler	Oxford	C5	39.510100	-84.723640
608	Richmondian	C5	Whitewater		OH	Adams	Seaman	C5	38.919444	-83.579722
609	Richmondian	C5	Liberty		IN	Dearborn	Weisburg	C5	39.217960	-85.045940
610	Richmondian	C5	Whitewater		OH	Montgomery	Centerville	C5	39.683948	-84.230496
611	Richmondian	C5	Whitewater		OH	Montgomery	Dayton	C5	39.758770	-84.191658
612	Richmondian	C5	Whitewater	Lebanon Beds	OH	Warren	Lebanon	C5	39.435220	-84.202900
613	Richmondian	C5	Whitewater		OH	Preble	Morning Sun	C5	39.596390	-84.737110
614	Richmondian	C5	Saluda		IN	Wayne	Richmond	C5	39.828870	-84.890290
615	Richmondian	C5	Waynesville	Blanchester	OH	Clinton	Blanchester	C5	39.301410	-83.981070
616	Richmondian	C5	Whitewater		IN	Wayne	Richmond	C5	39.828333	-84.892500
617	Richmondian	C5	Waynesville		OH	Greene		C5	39.583390	-84.031679
618	Richmondian	C5	Whitewater		IN	Wayne	Richmond	C5	39.828760	-84.890320
619	Richmondian	C5	Whitewater		IN	Wayne	Richmond	C5	39.828870	-84.890290
620	Richmondian	C5	Whitewater		IN	Wayne	Richmond	C5	39.834900	-84.896050
621	Richmondian	C5	Whitewater	Lower Whitewater	OH	Warren	Waynesville	C5	39.538670	-84.069220
622	Richmondian	C5	Waynesville	Blanchester	OH	Clinton	Clarksville	C5	39.402010	-83.971300
623	Richmondian	C5	Whitewater		IN	Wayne	Richmond	C5	39.759790	-84.907490
624	Richmondian	C5	Liberty		OH	Butler	Oxford	C5	39.499650	-84.718883
625	Richmondian	C5	Whitewater		OH	Clinton	Westboro	C5	39.281410	-83.910760
626	Richmondian	C5	Waynesville		OH	Brown	Fayetteville	C5	39.186600	-83.932590

Appendix 1. Species distribution data

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577	Cuts along sides of emergency spillway from Cowan Lake, immediately west of Ohio State Route 730
578	Exposures along walls and floor of emergency spillway for Caesar Creek Lake
579	Multiple streamside exposures along Flat Fork, upstream from where stream empties into Caesar Creek Lake
580	Roadcut on both sides of Indiana State Route 101, 5.0 miles north of Brookville
581	Roadcut on east side of US Route 421, 3.1 miles north of intersection with Indiana State Route 56 in Madison
582	Roadcut on Indiana State Route 1, 1.6 miles to 2.1 miles south of intersection with US Route 52 at Cedar Grove
583	Roadcut on west side of US Route 150, 0.6 miles west of Nelson / Washington county line
584	Creek just S of Morning Sun
585	Miamisburg RR cut
586	New Richmond
587	Trib Paint Cr Camden
588	West of Hamburg
589	
590	
591	2mi S of Richmond
592	Beasleys Cr
593	Big 4 RR cuts 14-15, Weisburg
594	Blanchester
595	Boston
596	Camden
597	Cr above bridge
598	creek b/t Penguite Hollow and Clarksville
599	Devil's Backbone Ck, Camden
600	Devil's Backbone on Rt 725, W of Camden
601	E side of Bell's run
602	E side of Whitewater Ck
603	Elkhorn Ck 4-5 mi S of Richmond
604	Elkhorn Creek, Richmond
605	Exp 3.5 mi N of Osgood
606	Flat Fork of Caesars Ck
607	Four Mile Creek, Oxford
608	Grace Run
609	Harpers Branch, Flowing North
610	Holes Cr, Centerville
611	Huffman Dam
612	Lebanon
613	Morning Sun
614	New Richmond
615	Penquite Hollow
616	Piano Factory, Richmond
617	Rdcut on Rt42 jct w/Roxanna Rd.
618	Richmond
619	Richmond, old quarries
620	Richmond, White River
621	Road w of waynesville
622	Sewalls Run
623	Short Ck, 3mi S of Rich
624	Talawanda Cr at County Line
625	Westboro
626	

Appendix 1. Species distribution data

627	Orthida	Platystrophiidae	<i>Platystrophia</i>	<i>acutilirata</i>	MUGM	23121	
628	Orthida	Platystrophiidae	<i>Platystrophia</i>	<i>acutilirata</i>	MUGM	23212	
629	Orthida	Platystrophiidae	<i>Platystrophia</i>	<i>acutilirata</i>	MUGM	23120	
630	Orthida	Platystrophiidae	<i>Platystrophia</i>	<i>acutilirata</i>	MUGM	23215	
631	Orthida	Platystrophiidae	<i>Platystrophia</i>	<i>acutilirata</i>	Holland and Patzkowsky 2007		72869
632	Orthida	Platystrophiidae	<i>Platystrophia</i>	<i>acutilirata</i>	Holland and Patzkowsky 2007		72570
633	Orthida	Platystrophiidae	<i>Platystrophia</i>	<i>acutilirata</i>	Holland and Patzkowsky 2007		72444
634	Orthida	Platystrophiidae	<i>Platystrophia</i>	<i>acutilirata</i>	MUGM	23380	2.9A9
635	Orthida	Platystrophiidae	<i>Platystrophia</i>	<i>acutilirata</i>	MUGM	23082	1.102
636	Orthida	Platystrophiidae	<i>Platystrophia</i>	<i>acutilirata</i>	MUGM	23373	1.1X2
637	Orthida	Platystrophiidae	<i>Platystrophia</i>	<i>acutilirata</i>	MUGM	23358	1.1D5
638	Orthida	Platystrophiidae	<i>Platystrophia</i>	<i>acutilirata</i>	MUGM	23384	2.6G4
639	Orthida	Platystrophiidae	<i>Platystrophia</i>	<i>acutilirata</i>	MUGM	23330	1.1A12
640	Orthida	Platystrophiidae	<i>Platystrophia</i>	<i>acutilirata</i>	MUGM	23085	1.1H5
641	Orthida	Platystrophiidae	<i>Platystrophia</i>	<i>acutilirata</i>	MUGM	23360	
642	Orthida	Platystrophiidae	<i>Platystrophia</i>	<i>acutilirata</i>	CiMNH		
643	Orthida	Platystrophiidae	<i>Platystrophia</i>	<i>acutilirata</i>	MUGM	23079	1.3A4
644	Orthida	Platystrophiidae	<i>Platystrophia</i>	<i>acutilirata</i>	CiMNH	P50007	
645	Orthida	Platystrophiidae	<i>Platystrophia</i>	<i>acutilirata</i>	MUGM	23084	1.3C3
646	Orthida	Platystrophiidae	<i>Platystrophia</i>	<i>acutilirata</i>	MUGM	23297	
647	Orthida	Platystrophiidae	<i>Platystrophia</i>	<i>acutilirata</i>	Holland and Patzkowsky 2007		72455
648	Orthida	Platystrophiidae	<i>Platystrophia</i>	<i>annieana</i>	CiMNH	20711	
649	Orthida	Platystrophiidae	<i>Platystrophia</i>	<i>annieana</i>	CiMNH	28669	
650	Orthida	Platystrophiidae	<i>Platystrophia</i>	<i>annieana</i>	MUGM	23309	
651	Orthida	Platystrophiidae	<i>Platystrophia</i>	<i>annieana</i>	MUGM	23312	1.1A5
652	Orthida	Platystrophiidae	<i>Platystrophia</i>	<i>annieana</i>	CiMNH	21530	
653	Orthida	Platystrophiidae	<i>Platystrophia</i>	<i>annieana</i>	CiMNH	20710	
654	Orthida	Platystrophiidae	<i>Platystrophia</i>	<i>annieana</i>	MUGM	14513	
655	Orthida	Platystrophiidae	<i>Platystrophia</i>	<i>annieana</i>	CiMNH	27528	
656	Orthida	Platystrophiidae	<i>Platystrophia</i>	<i>annieana</i>	MUGM	23131	
657	Orthida	Platystrophiidae	<i>Platystrophia</i>	<i>annieana</i>	MUGM	23311	
658	Orthida	Platystrophiidae	<i>Platystrophia</i>	<i>annieana</i>	MUGM	23313	1.1V4
659	Orthida	Platystrophiidae	<i>Platystrophia</i>	<i>annieana</i>	MUGM	23113	
660	Orthida	Platystrophiidae	<i>Platystrophia</i>	<i>auburnensis</i>	Field		
661	Orthida	Platystrophiidae	<i>Platystrophia</i>	<i>auburnensis</i>	Field		
662	Orthida	Platystrophiidae	<i>Platystrophia</i>	<i>auburnensis</i>	CiMNH		
663	Orthida	Platystrophiidae	<i>Platystrophia</i>	<i>auburnensis</i>	CiMNH	23881	
664	Orthida	Platystrophiidae	<i>Platystrophia</i>	<i>auburnensis</i>	CiMNH	28743	
665	Orthida	Platystrophiidae	<i>Platystrophia</i>	<i>auburnensis</i>	CiMNH	18273	
666	Orthida	Platystrophiidae	<i>Platystrophia</i>	<i>auburnensis</i>	Field		
667	Orthida	Platystrophiidae	<i>Platystrophia</i>	<i>auburnensis</i>	Field		
668	Orthida	Platystrophiidae	<i>Platystrophia</i>	<i>auburnensis</i>	CiMNH	28715	
669	Orthida	Platystrophiidae	<i>Platystrophia</i>	<i>auburnensis</i>	Field		
670	Orthida	Platystrophiidae	<i>Platystrophia</i>	<i>auburnensis</i>	CiMNH	23880	
671	Orthida	Platystrophiidae	<i>Platystrophia</i>	<i>auburnensis</i>	CiMNH	23977	
672	Orthida	Platystrophiidae	<i>Platystrophia</i>	<i>auburnensis</i>	Roy H. Reinhart, 1977		Stop 6
673	Orthida	Platystrophiidae	<i>Platystrophia</i>	<i>auburnensis</i>	CiMNH	20852	
674	Orthida	Platystrophiidae	<i>Platystrophia</i>	<i>auburnensis</i>	Richard Hicklin, MS, 1933		Station E
675	Orthida	Platystrophiidae	<i>Platystrophia</i>	<i>auburnensis</i>	Richard Hicklin, MS, 1933		Station I
676	Orthida	Platystrophiidae	<i>Platystrophia</i>	<i>auburnensis</i>	Richard Hicklin, MS, 1933		Station 6-J
677	Orthida	Platystrophiidae	<i>Platystrophia</i>	<i>auburnensis</i>	CiMNH	23884	
678	Orthida	Platystrophiidae	<i>Platystrophia</i>	<i>clarksvillensis</i>	MUGM	23596	
679	Orthida	Platystrophiidae	<i>Platystrophia</i>	<i>clarksvillensis</i>	MUGM	23584	
680	Orthida	Platystrophiidae	<i>Platystrophia</i>	<i>clarksvillensis</i>	CiMNH		
681	Orthida	Platystrophiidae	<i>Platystrophia</i>	<i>clarksvillensis</i>	Field		IN-FR-0001
682	Orthida	Platystrophiidae	<i>Platystrophia</i>	<i>clarksvillensis</i>	MUGM	24082	
683	Orthida	Platystrophiidae	<i>Platystrophia</i>	<i>clarksvillensis</i>	CiMNH	20585	

Appendix 1. Species distribution data

627	Richmondian	C5	Waynesville		IN	Dearborn	Weisburg	C5	39.215931	-85.045151
628	Richmondian	C5	Whitewater		OH	Butler	Oxford	C5	39.507271	-84.745682
629	Richmondian	C5	Waynesville		OH	Warren	Edgewood	C5	39.545890	-84.136790
630	Richmondian	C5	Whitewater		IN	Wayne	Richmond	C5	39.829060	-84.891563
631	Richmondian	C5	Whitewater		OH	Clinton		C5	39.3894	-83.927
632	Richmondian	C5	Liberty		OH	Warren		C5	39.48027	-84.5712
633	Richmondian	C5	Whitewater	Lower	IN	Union		C5	39.48798	-84.94867
634	Richmondian	C6	Elkhorn		IN	Ripley	Versailles	C6	39.081030	-85.251026
635	Richmondian	C6	Whitewater	Upper Whitewater	OH	Butler		C6	39.506920	-84.745150
636	Richmondian	C6	Whitewater	Upper Whitewater	OH	Preble	Morning Sun	C6	39.592356	-84.737397
637	Richmondian	C6	Whitewater	Upper Whitewater	OH	Preble		C6	39.580920	-84.751020
638	Richmondian	C6	Whitewater	Upper Whitewater	IN	Franklin	Hamburg	C6	39.379670	-85.250880
639	Richmondian	C6	Whitewater	Upper Whitewater	OH	Butler	Oxford	C6	39.534100	-84.737760
640	Richmondian	C6	Whitewater	Upper Whitewater	OH	Butler		C6	39.508290	-84.716950
641	Richmondian	C6	Whitewater	Upper Whitewater	OH	Preble	Oxford	C6	39.631570	-84.749928
642	Richmondian	C6	Whitewater	Upper Whitewater	OH	Butler	Oxford	C6	39.506870	-84.745100
643	Richmondian	C6	Whitewater	Upper Whitewater	OH	Preble	Hamilton	C6	39.617230	-84.645930
644	Richmondian	C6	Whitewater	Upper Whitewater	IN	Wayne	Richmond	C6	39.759790	-84.918910
645	Richmondian	C6	Whitewater	Upper Whitewater	OH	Preble	Camden	C6	39.627018	-84.663783
646	Richmondian	C6	Elkhorn		IN	Franklin	Hamburg	C6	39.380700	-85.250890
647	Richmondian	C6	Whitewater	Upper	IN	Wayne		C6	39.78728	-84.90183
648	Richmondian	C5	Whitewater		OH	Preble	Camden	C5	39.628910	-84.648690
649	Richmondian	C5	Whitewater		OH	Preble	Camden	C5	39.627020	-84.664720
650	Richmondian	C5	Liberty		OH	Butler	Oxford	C5	39.506920	-84.745150
651	Richmondian	C5	Liberty		OH	Butler	Oxford	C5	39.534100	-84.737760
652	Richmondian	C5	Waynesville		OH	Butler	Oxford	C5	39.510100	-84.723640
653	Richmondian	C5	Waynesville		OH	Warren	Lebanon	C5	39.435220	-84.202900
654	Richmondian	C5	Waynesville		OH	Greene		C5	39.583390	-84.031679
655	Richmondian	C5	Whitewater		IN	Wayne	Richmond	C5	39.828760	-84.890320
656	Richmondian	C5	Waynesville		OH	Clinton	Blanchester	C5	39.301410	-83.981070
657	Richmondian	C5	Liberty		KY	Nelson	Bardstown	C5	37.818150	-85.448180
658	Richmondian	C5	Liberty		OH	Butler	Oxford	C5	39.499650	-84.718883
659	Richmondian	C5	Waynesville		OH	Clinton	Blanchester	C5	39.301410	-83.981070
660	Maysvillian	C3	McMillan	Mt. Auburn	KY	Trimble	Bedford	C3	38.601383	-85.274216
661	Maysvillian	C3	McMillan	Mt. Auburn	KY	Madison	Bybee	C3	37.709050	-84.314850
662	Maysvillian	C3	McMillan	Mt. Auburn	OH	Hamilton	Cincinnati	C3	39.162040	-84.456990
663	Maysvillian	C3	McMillan	Mt. Auburn	OH	Hamilton	College Hill	C3	39.202160	-84.547050
664	Maysvillian	C3	McMillan	Mt. Auburn	OH	Butler	Pisgah	C3	39.311940	-84.369060
665	Maysvillian	C3	McMillan	Corryville	OH	Brown	Russellville	C3	38.849670	-83.748870
666	Maysvillian	C3	McMillan	Mt. Auburn	KY	Washington	Fredericktown	C3	37.723450	-85.281666
667	Maysvillian	C3	McMillan	Mt. Auburn	KY	Washington	Fredericktown	C3	37.762666	-85.339433
668	Maysvillian	C3	McMillan	Mt. Auburn	OH	Hamilton	College Hill	C3	39.053889	-84.536667
669	Maysvillian	C3	McMillan	Mt. Auburn	KY	Lincoln		C3	37.577533	-84.610283
670	Maysvillian	C3	McMillan	Mt. Auburn	OH	Butler	Maud	C3	39.355180	-84.390480
671	Maysvillian	C3	McMillan	Mt. Auburn	OH	Hamilton	Cincinnati	C3	39.128056	-84.526389
672	Maysvillian	C3	McMillan	Mt. Auburn	OH	Butler	Maud	C3	39.355180	-84.390480
673	Maysvillian	C3	McMillan	Mt. Auburn	OH	Hamilton	Sharon Creek	C3	39.258110	-84.425130
674	Maysvillian	C3	McMillan	Mt. Auburn	KY	Clark	Agawam	C3	37.8951	-84.0875
675	Maysvillian	C3	McMillan	Mt. Auburn	KY	Bath	Owingsville	C3	38.1478	-83.825
676	Maysvillian	C3	McMillan	Mt. Auburn	KY	Fleming	Flemingsburg	C3	38.3694	-83.7375
677	Maysvillian	C3	McMillan	Mt. Auburn	OH	Brown	Russellville	C3	38.866390	-83.786800
678	Richmondian	C4	Arnheim		OH	Adams	Decatur	C4	38.812222	-83.681667
679	Richmondian	C4	Arnheim		OH	Brown	Russelville	C4	38.874444	-83.787222
680	Richmondian	C5	Waynesville	Clarksville	OH	Clinton	Blanchester	C5	39.293110	-83.988880
681	Richmondian	C5	Liberty		IN	Franklin	Brookville	C5	39.437950	-84.987400
682	Richmondian	C5	Waynesville		OH	Butler		C5	39.503020	-84.759220
683	Richmondian	C5	Waynesville		OH	Clinton	Clarksville	C5	39.401290	-83.981420

Appendix 1. Species distribution data

627
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629
630
631 Cuts along sides of emergency spillway from Cowan Lake, immediately west of Ohio State Route 730
632 Exposures along walls and floor of emergency spillway for Caesar Creek Lake
633 Roadcut on both sides of Indiana State Route 101, 5.0 miles north of Brookville
634 Cedar Ck. N of Versailles
635 Coral Banks
636 Creek Just South of Morning Sun
637 Current Heuston Woods Lodge
638 Cut along Rd W of Hamburg
639 Dodges Ck north of Oxford
640 Harkers Run
641 McDills Mills, 9mi N of Oxford
642 Oxford
643 Paint Crk above Devils Backbone
644 South of Richmond on US 27
645 Trib Paint Cr camden
646
647 Roadcuts on both sides of US Route 27, 0.8 miles north of intersection with Beelor Road
648 Camden
649 Devil's Backbone Ck, Camden
650 Dodges Ck
651 Dodges Ck north of Oxford
652 Four Mile Creek, Oxford
653 N of Lebanon
654 Rdcut on Rt47, Jct w/Roxanna Rd.
655 Richmond
656 Second Creek
657 Section along Ck followin 4mi E of Barstown
658 Talawanda Cr at County Line
659
660 Bedford
661 Bybee
662 Cincinnati
663 College Hill, greater Cincy
664 creek 1 mi S of Pisgah, OH
665 Eagle Ck at covered bridge, 4 mi below Russelville
666 Fredericktown
667 Fredericktown
668 Groesbeck Rd, 1st cut on top near College Hill (greater Cincinnati)
669 Lincoln County Line
670 Maud
671 McMillan St, Cincinnati
672 Railroad cut at intersection of NYC railroad and I75
673 Sharon Creek, elev 808
674
675
676
677
678 1st Ck. X-ing W. union pike
679 Ck. N. of Russelville
680 Blanchester
681 Bon Well Hill
682 Bulls Run (Collins Run)
683 Clarksville

Appendix 1. Species distribution data

684	Orthida	Platystrophiidae	<i>Platystrophia</i>	<i>clarksvillensis</i>	CiMNH	16616	
685	Orthida	Platystrophiidae	<i>Platystrophia</i>	<i>clarksvillensis</i>	Field		IN-FR-0003
686	Orthida	Platystrophiidae	<i>Platystrophia</i>	<i>clarksvillensis</i>	CiMNH	12924	
687	Orthida	Platystrophiidae	<i>Platystrophia</i>	<i>clarksvillensis</i>	CiMNH	11798	
688	Orthida	Platystrophiidae	<i>Platystrophia</i>	<i>clarksvillensis</i>	Field		IN-JE-0001
689	Orthida	Platystrophiidae	<i>Platystrophia</i>	<i>clarksvillensis</i>	CiMNH	28672	
690	Orthida	Platystrophiidae	<i>Platystrophia</i>	<i>clarksvillensis</i>	CiMNH	21768	
691	Orthida	Platystrophiidae	<i>Platystrophia</i>	<i>clarksvillensis</i>	CiMNH	28381	
692	Orthida	Platystrophiidae	<i>Platystrophia</i>	<i>clarksvillensis</i>	CiMNH	21771	
693	Orthida	Platystrophiidae	<i>Platystrophia</i>	<i>clarksvillensis</i>	CiMNH		
694	Orthida	Platystrophiidae	<i>Platystrophia</i>	<i>clarksvillensis</i>	MUGM	7111	
695	Orthida	Platystrophiidae	<i>Platystrophia</i>	<i>clarksvillensis</i>	Field		
696	Orthida	Platystrophiidae	<i>Platystrophia</i>	<i>clarksvillensis</i>	CiMNH	20581	
697	Orthida	Platystrophiidae	<i>Platystrophia</i>	<i>clarksvillensis</i>	Field		IN-FR-0005
698	Orthida	Platystrophiidae	<i>Platystrophia</i>	<i>clarksvillensis</i>	CiMNH	20584	
699	Orthida	Platystrophiidae	<i>Platystrophia</i>	<i>clarksvillensis</i>	CiMNH	28372	
700	Orthida	Platystrophiidae	<i>Platystrophia</i>	<i>clarksvillensis</i>	MUGM	23115	
701	Orthida	Platystrophiidae	<i>Platystrophia</i>	<i>clarksvillensis</i>	CiMNH	28641	
702	Orthida	Platystrophiidae	<i>Platystrophia</i>	<i>clarksvillensis</i>	CiMNH	20583	
703	Orthida	Platystrophiidae	<i>Platystrophia</i>	<i>clarksvillensis</i>	MUGM	23279	
704	Orthida	Platystrophiidae	<i>Platystrophia</i>	<i>clarksvillensis</i>	Holland and Patzkowsky 2007		72805
705	Orthida	Platystrophiidae	<i>Platystrophia</i>	<i>clarksvillensis</i>	Holland and Patzkowsky 2007		72444
706	Orthida	Platystrophiidae	<i>Platystrophia</i>	<i>clarksvillensis</i>	Holland and Patzkowsky 2007		72623
707	Orthida	Platystrophiidae	<i>Platystrophia</i>	<i>clarksvillensis</i>	Holland and Patzkowsky 2007		72454
708	Orthida	Platystrophiidae	<i>Platystrophia</i>	<i>corryvillensis</i>	MUGM	23190	
709	Orthida	Platystrophiidae	<i>Platystrophia</i>	<i>crassa</i>	MUGM	11310	
710	Orthida	Platystrophiidae	<i>Platystrophia</i>	<i>crassa</i>	MUGM	23184	
711	Orthida	Platystrophiidae	<i>Platystrophia</i>	<i>crassa</i>	MUGM	23863	
712	Orthida	Platystrophiidae	<i>Platystrophia</i>	<i>crassa</i>	MUGM	23861	
713	Orthida	Platystrophiidae	<i>Platystrophia</i>	<i>crassa</i>	MUGM	23158	
714	Orthida	Platystrophiidae	<i>Platystrophia</i>	<i>crassa</i>	MUGM	11316	
715	Orthida	Platystrophiidae	<i>Platystrophia</i>	<i>crassa</i>	Oldroyd, PhD, 1978		0-2m
716	Orthida	Platystrophiidae	<i>Platystrophia</i>	<i>cummingsi</i>	MUGM	6179	2.3G6
717	Orthida	Platystrophiidae	<i>Platystrophia</i>	<i>cummingsi</i>	MUGM	15817	
718	Orthida	Platystrophiidae	<i>Platystrophia</i>	<i>cummingsi</i>	MUGM	7298	1.1I7
719	Orthida	Platystrophiidae	<i>Platystrophia</i>	<i>cummingsi</i>	MUGM	14043	
720	Orthida	Platystrophiidae	<i>Platystrophia</i>	<i>cummingsi</i>	MUGM	23118	
721	Orthida	Platystrophiidae	<i>Platystrophia</i>	<i>cummingsi</i>	MUGM	23865	
722	Orthida	Platystrophiidae	<i>Platystrophia</i>	<i>cypha</i>	CiMNH	8631	
723	Orthida	Platystrophiidae	<i>Platystrophia</i>	<i>cypha</i>	CiMNH		
724	Orthida	Platystrophiidae	<i>Platystrophia</i>	<i>cypha</i>	CiMNH	13857	
725	Orthida	Platystrophiidae	<i>Platystrophia</i>	<i>cypha</i>	CiMNH	20681	
726	Orthida	Platystrophiidae	<i>Platystrophia</i>	<i>cypha</i>	Field		
727	Orthida	Platystrophiidae	<i>Platystrophia</i>	<i>cypha</i>	MUGM	23180	
728	Orthida	Platystrophiidae	<i>Platystrophia</i>	<i>cypha</i>	Holland and Patzkowsky 2007		72773
729	Orthida	Platystrophiidae	<i>Platystrophia</i>	<i>cypha</i>	MUGM	23090	2.3G1
730	Orthida	Platystrophiidae	<i>Platystrophia</i>	<i>cypha</i>	CiMNH		
731	Orthida	Platystrophiidae	<i>Platystrophia</i>	<i>cypha</i>	CiMNH	20622	
732	Orthida	Platystrophiidae	<i>Platystrophia</i>	<i>cypha</i>	MUGM	23843	
733	Orthida	Platystrophiidae	<i>Platystrophia</i>	<i>cypha</i>	Holland and Patzkowsky 2007		73104
734	Orthida	Platystrophiidae	<i>Platystrophia</i>	<i>cypha</i>	CiMNH	28630	
735	Orthida	Platystrophiidae	<i>Platystrophia</i>	<i>cypha</i>	MUGM	23840	
736	Orthida	Platystrophiidae	<i>Platystrophia</i>	<i>cypha</i>	MUGM	24737	1.51L14
737	Orthida	Platystrophiidae	<i>Platystrophia</i>	<i>cypha</i>	CiMNH	11769	
738	Orthida	Platystrophiidae	<i>Platystrophia</i>	<i>cypha</i>	MUGM	7605	
739	Orthida	Platystrophiidae	<i>Platystrophia</i>	<i>cypha</i>	MUGM	29443	1.51N7
740	Orthida	Platystrophiidae	<i>Platystrophia</i>	<i>cypha</i>	CiMNH	20672	

Appendix 1. Species distribution data

684	Richmondian	C5	Waynesville		OH	Warren	Edgewood	C5	39.545890	-84.136790
685	Richmondian	C5	Liberty		IN	Franklin	Brookville	C5	39.480383	-84.948633
686	Richmondian	C5	Whitewater		OH	Montgomery	Centerville	C5	39.683948	-84.230496
687	Richmondian	C5	Liberty		OH	Preble	College Corner	C5	39.567550	-84.814530
688	Richmondian	C5	Liberty		IN	Jefferson	Madison	C5	38.775880	-85.363800
689	Richmondian	C5	Waynesville	Clarksville	IN	Steuben	Cold Springs	C5	39.111270	-85.081950
690	Richmondian	C5	Waynesville		OH	Warren	Lebanon	C5	39.435220	-84.202900
691	Richmondian	C5	Waynesville	Clarksville	IN	Franklin	Oldenburg	C5	39.339700	-85.204320
692	Richmondian	C5	Waynesville		OH	Butler	Oxford	C5	39.506870	-84.745100
693	Richmondian	C5	Whitewater		IN	Wayne	Richmond	C5	39.828333	-84.892500
694	Richmondian	C5	Waynesville		OH	Greene		C5	39.583390	-84.031679
695	Richmondian	C5	Waynesville		IN	Wayne	Richmond	C5	37.748466	-84.297716
696	Richmondian	C5	Waynesville		OH	Clinton	Clarksville	C5	39.402010	-83.971300
697	Richmondian	C5	Waynesville		IN	Franklin	Brookville	C5	39.341966	-84.953650
698	Richmondian	C5	Waynesville	Blanchester	OH	Clinton	Blanchester	C5	39.238170	-84.022960
699	Richmondian	C5	Waynesville		OH	Clinton	Clarksville	C5	39.406140	-83.987000
700	Richmondian	C5	Waynesville		OH	Clinton	Clarksville	C5	39.415833	-83.990278
701	Richmondian	C5	Waynesville	Blanchester	IN	Ripley	Versailles	C5	39.080720	-85.250430
702	Richmondian	C5	Waynesville		IN	Dearborn	Weisburg	C5	39.217960	-85.045940
703	Richmondian	C5	Waynesville		OH	Warren	Ft. Ancient	C5	39.408033	-84.091466
704	Richmondian	C5	Waynesville	Fort Ancient	OH	Warren		C5	39.48127	-84.6817
705	Richmondian	C5	Whitewater	Lower	IN	Union		C5	39.48798	-84.94867
706	Richmondian	C5	Waynesville		OH	Warren		C5	39.54853	-84.05233
707	Richmondian	C6	Whitewater	Upper	IN	Union		C6	39.48798	-84.94867
708	Maysvillian	C3	McMillan	Corryville	OH	Hamilton	Cincinnati	C3	39.126460	-84.524490
709	Maysvillian	C2	Fairview	Fairmount	OH	Hamilton	Cincinnati	C2	39.122940	-84.523270
710	Maysvillian	C2	Fairview	Fairmount	OH	Hamilton	Cincinnati	C2	39.115379	-84.551808
711	Maysvillian	C2	Fairview	Fairmount	KY	Kenton	Covington	C2	39.083816	-84.510100
712	Maysvillian	C2	Fairview	Fairmount	KY	Kenton	Covington	C2	39.083833	-84.510116
713	Maysvillian	C2	Fairview	Fairmount	KY	Kenton	West Covington	C2	39.088459	-84.533829
714	Maysvillian	C2	Fairview	Fairmount	OH	Hamilton	Cincinnati	C2	39.161938	-84.456680
715	Maysvillian	C3	Dillsboro	Corryville	IN	Jefferson	Madison	C3	38.7511	-85.1417
716	Richmondian	C5	Waynesville		IN	Franklin	Brookville	C5	39.440100	-85.002880
717	Richmondian	C5	Liberty		IN	Franklin	Brookville	C5	39.437820	-85.005460
718	Richmondian	C5	Waynesville	Blanchester	OH	Butler		C5	39.503020	-84.759220
719	Richmondian	C5	Waynesville		IN	Franklin	Brookville	C5	39.437820	-85.005460
720	Richmondian	C5	Waynesville		IN	Dearborn	Weisburg	C5	39.215931	-85.045151
721	Richmondian	C5	Waynesville		OH	Butler	Oxford	C5	39.507271	-84.745682
722	Maysvillian	C2	Fairview	Fairmount	OH	Clermont	Bethel	C2	39.016080	-84.090340
723	Maysvillian	C2	McMillan	Bellevue	OH	Hamilton	Cincinnati	C2	39.122778	-84.523056
724	Maysvillian	C2	Fairview	Fairmount	KY	Kenton	Covington	C2	39.053889	-84.529444
725	Maysvillian	C2	McMillan	Bellevue	OH	Clermont	Bethel	C2	38.963590	-84.080930
726	Maysvillian	C2	McMillan	Bellevue	KY	Washington		C2	37.764900	-85.353416
727	Maysvillian	C2	McMillan	Bellevue	IN	Jefferson	Madison	C2	38.744884	-85.423721
728	Maysvillian	C2	Fairview		KY	Kenton		C2	39.02778	-84.51055
729	Maysvillian	C3	McMillan	Corryville	IN	Franklin	Brookville	C3	39.440100	-85.002880
730	Maysvillian	C3	McMillan	Mt. Auburn	OH	Hamilton	Nassau	C3	39.118333	-84.495833
731	Maysvillian	C3	McMillan	Mt. Auburn	OH	Hamilton	Price Hill	C3	39.110000	-84.575840
732	Maysvillian	C3	McMillan	Corryville	OH	Hamilton	Cincinnati	C3	39.161938	-84.456680
733	Maysvillian	C3	Mount Auburn		KY	Mason		C3	38.50455	-83.75855
734	Richmondian	C4	Arnheim		OH	Butler	Maud	C4	39.345500	-84.386500
735	Richmondian	C4	Arnheim		KY	Jefferson	Fisherville	C4	38.190090	-85.414490
736	Richmondian	C4	Arnheim		OH	Adams		C4	38.793283	-83.545150
737	Richmondian	C4	Arnheim		KY	Mason	Maysville	C4	38.598611	-83.765556
738	Richmondian	C4	Arnheim		OH	Adams	Manchester	C4	38.692180	-83.603970
739	Richmondian	C4	Arnheim		OH	Adams	Decatur	C4	38.812222	-83.681667
740	Richmondian	C4	Arnheim		OH	Brown	Russellville	C4	38.866390	-83.786800

Appendix 1. Species distribution data

684	Edgewood
685	Garr Hill
686	Holes Cr, Centerville
687	L. 4mi Ck, College Corner
688	Madison-421N
689	Moores Hill, Cold Springs
690	North of Lebanon
691	Oldenburg
692	Oxford
693	Piano Factory, Richmond
694	Rdcut on Rt42 jct w/Roxanna Rd.
695	Richmond
696	Sewalls Run
697	South Gate Hill
698	Stone lick ck, 3 mi W of Blanchesters
699	Stoney Ck, Clarksville, OH
700	Stony Hollow
701	Wash bank, Versailles
702	Weisburg
703	
704	Multiple streamside exposures along unnamed stream that flows west of end of emergency spillway for Caesar Creek Lake and northward into Caesar Creek
705	Roadcut on both sides of Indiana State Route 101, 5.0 miles north of Brookville
706	Roadcut on west side of US Route 42, 1.2 miles north of Main Street in Waynesville
707	Roadcut on both sides of Indiana State Route 101, 5.0 miles north of Brookville
708	Corryville flats
709	Hospital Grounds
710	Lehman Rd.
711	
712	
713	
714	
715	Large Roadcut across U. S. Highway 421 from cemetery, 0.9 miles north of Madison, Indiana, courthouse. NW 14 NE 1/4 sect. 35, T4N, R10E, Madison West quadrangle, Indiana-Kentucky
716	Blue Ck flwoing into WW3/4 S. Brookville
717	Brookville Lake Causeway hill ease of lake
718	Bulls Run
719	Causeway cut E of Brookville 2nd cut S side of Rd, 1st Bend
720	RR cut 11,15
721	
722	Bethel, lower and middle Cloverlick Ck
723	Emming St, Cincinnati
724	Highland Pike, Covington
725	near Bethel
726	Nelson/Washington line
727	Quarry
728	Roadcut on northeast side of Mason Road, 0.2 miles southeast of intersection with Taylor Mill Road
729	Blue Ck flwoing into WW3/4 S. Brookville
730	Gilbert Ave near Nassau, Cincinnati
731	Price Hill, Road cut on E side of Grand Ave, E of water tanks
732	
733	Roadcut on both sides of Kentucky State Route 11, 0.4 miles north of intersection with Kentucky State Route 324 at Weedonia
734	1 mi S of Maud
735	1mi E fisherville
736	1st creek xing W of union pike
737	3 mi S of Maysville
738	Issac's Run
739	W of Union Pike E of Decatur
740	

Appendix 1. Species distribution data

741	Orthida	Platystrophiidae	<i>Platystrophia</i>	<i>cypha</i>	MUGM	23831	1.117
742	Orthida	Platystrophiidae	<i>Platystrophia</i>	<i>cypha</i>	CiMNH		
743	Orthida	Platystrophiidae	<i>Platystrophia</i>	<i>cypha</i>	Field		OH-WA-0003
744	Orthida	Platystrophiidae	<i>Platystrophia</i>	<i>cypha</i>	Field		IN-FR-0003
745	Orthida	Platystrophiidae	<i>Platystrophia</i>	<i>cypha</i>	MUGM	23832	
746	Orthida	Platystrophiidae	<i>Platystrophia</i>	<i>cypha</i>	CiMNH	12457	
747	Orthida	Platystrophiidae	<i>Platystrophia</i>	<i>cypha</i>	MUGM	23833	2.612B
748	Orthida	Platystrophiidae	<i>Platystrophia</i>	<i>cypha</i>	MUGM	29442	1.43A7
749	Orthida	Platystrophiidae	<i>Platystrophia</i>	<i>cypha</i>	MUGM	23135	
750	Orthida	Platystrophiidae	<i>Platystrophia</i>	<i>cypha</i>	CiMNH		
751	Orthida	Platystrophiidae	<i>Platystrophia</i>	<i>cypha</i>	CiMNH	20584	
752	Orthida	Platystrophiidae	<i>Platystrophia</i>	<i>cypha</i>	MUGM	23834	2.13
753	Orthida	Platystrophiidae	<i>Platystrophia</i>	<i>cypha</i>	CiMNH	28641	
754	Orthida	Platystrophiidae	<i>Platystrophia</i>	<i>cypha</i>	CiMNH	1418	
755	Orthida	Platystrophiidae	<i>Platystrophia</i>	<i>cypha</i>	MUGM	23836	2.13EF
756	Orthida	Platystrophiidae	<i>Platystrophia</i>	<i>cypha</i>	MUGM	23272	
757	Orthida	Platystrophiidae	<i>Platystrophia</i>	<i>cypha</i>	CiMNH	28486	
758	Orthida	Platystrophiidae	<i>Platystrophia</i>	<i>elkhornensis</i>	MUGM	23323	1.117
759	Orthida	Platystrophiidae	<i>Platystrophia</i>	<i>elkhornensis</i>	MUGM	23327	1.42C4
760	Orthida	Platystrophiidae	<i>Platystrophia</i>	<i>elkhornensis</i>	MUGM	23318	1.3D12
761	Orthida	Platystrophiidae	<i>Platystrophia</i>	<i>elkhornensis</i>	MUGM	23319	2.9A10
762	Orthida	Platystrophiidae	<i>Platystrophia</i>	<i>elkhornensis</i>	MUGM	23329	1.1X7
763	Orthida	Platystrophiidae	<i>Platystrophia</i>	<i>elkhornensis</i>	MUGM	23328	1.42B5
764	Orthida	Platystrophiidae	<i>Platystrophia</i>	<i>elkhornensis</i>	MUGM	23289	2.8A2
765	Orthida	Platystrophiidae	<i>Platystrophia</i>	<i>elkhornensis</i>	MUGM	23320	2.10E+06
766	Orthida	Platystrophiidae	<i>Platystrophia</i>	<i>elkhornensis</i>	MUGM	23326	1.4D4
767	Orthida	Platystrophiidae	<i>Platystrophia</i>	<i>foerstei</i>	MUGM	23130	
768	Orthida	Platystrophiidae	<i>Platystrophia</i>	<i>foerstei</i>	MUGM	23129	
769	Orthida	Platystrophiidae	<i>Platystrophia</i>	<i>hopensis</i>	Holland and Patzkowsky 2007		72697
770	Orthida	Platystrophiidae	<i>Platystrophia</i>	<i>hopensis</i>	CiMNH		
771	Orthida	Platystrophiidae	<i>Platystrophia</i>	<i>hopensis</i>	CiMNH		
772	Orthida	Platystrophiidae	<i>Platystrophia</i>	<i>hopensis</i>	CiMNH	20856	
773	Orthida	Platystrophiidae	<i>Platystrophia</i>	<i>hopensis</i>	CiMNH	23955	
774	Orthida	Platystrophiidae	<i>Platystrophia</i>	<i>hopensis</i>	CiMNH	27575	
775	Orthida	Platystrophiidae	<i>Platystrophia</i>	<i>hopensis</i>	CiMNH	10533	
776	Orthida	Platystrophiidae	<i>Platystrophia</i>	<i>hopensis</i>	CiMNH	24254	
777	Orthida	Platystrophiidae	<i>Platystrophia</i>	<i>hopensis</i>	Holland and Patzkowsky 2007		72984
778	Orthida	Platystrophiidae	<i>Platystrophia</i>	<i>hopensis</i>	Holland and Patzkowsky 2007		72752
779	Orthida	Platystrophiidae	<i>Platystrophia</i>	<i>hopensis</i>	Holland and Patzkowsky 2007		72650
780	Orthida	Platystrophiidae	<i>Platystrophia</i>	<i>hopensis</i>	Holland and Patzkowsky 2007		72779
781	Orthida	Platystrophiidae	<i>Platystrophia</i>	<i>hopensis</i>	Holland and Patzkowsky 2007		73076
782	Orthida	Platystrophiidae	<i>Platystrophia</i>	<i>hopensis</i>	Holland and Patzkowsky 2007		72991
783	Orthida	Platystrophiidae	<i>Platystrophia</i>	<i>laticosta</i>	CiMNH	27933	
784	Orthida	Platystrophiidae	<i>Platystrophia</i>	<i>laticosta</i>	CiMNH	20639	
785	Orthida	Platystrophiidae	<i>Platystrophia</i>	<i>laticosta</i>	MUGM	11322	
786	Orthida	Platystrophiidae	<i>Platystrophia</i>	<i>laticosta</i>	CiMNH	12600	
787	Orthida	Platystrophiidae	<i>Platystrophia</i>	<i>laticosta</i>	CiMNH	1430	
788	Orthida	Platystrophiidae	<i>Platystrophia</i>	<i>laticosta</i>	MUGM	23175	
789	Orthida	Platystrophiidae	<i>Platystrophia</i>	<i>laticosta</i>	CiMNH		
790	Orthida	Platystrophiidae	<i>Platystrophia</i>	<i>laticosta</i>	CiMNH	12598	
791	Orthida	Platystrophiidae	<i>Platystrophia</i>	<i>laticosta</i>	CiMNH		
792	Orthida	Platystrophiidae	<i>Platystrophia</i>	<i>laticosta</i>	CiMNH		
793	Orthida	Platystrophiidae	<i>Platystrophia</i>	<i>laticosta</i>	MUGM	15766	
794	Orthida	Platystrophiidae	<i>Platystrophia</i>	<i>laticosta</i>	CiMNH	1424	
795	Orthida	Platystrophiidae	<i>Platystrophia</i>	<i>laticosta</i>	Field		IN-JE-0003
796	Orthida	Platystrophiidae	<i>Platystrophia</i>	<i>laticosta</i>	CiMNH	8608	
797	Orthida	Platystrophiidae	<i>Platystrophia</i>	<i>laticosta</i>	MUGM	23156	

Appendix 1. Species distribution data

741	Richmondian	C5	Waynesville	Blanchester	OH	Butler		C5	39.503020	-84.759220
742	Richmondian	C5	Waynesville		OH	Preble	Camden	C5	39.628910	-84.648690
743	Richmondian	C5	Liberty		OH	Warren		C5	39.477600	-84.063010
744	Richmondian	C5	Liberty		IN	Franklin	Brookville	C5	39.480383	-84.948633
745	Richmondian	C5	Waynesville		IN	Franklin	Oldenburg	C5	39.339649	-85.204193
746	Richmondian	C5	Waynesville		OH	Warren	Lebanon	C5	39.435220	-84.202900
747	Richmondian	C5	Waynesville		IN	Franklin	Hamburg	C5	39.379770	-85.251360
748	Richmondian	C5	Waynesville		OH	Clinton	Clarksville	C5	39.301410	-83.981070
749	Richmondian	C5	Waynesville		IN	Dearborn	Weisburg	C5	39.215931	-85.045151
750	Richmondian	C5	Waynesville		IN	Dearborn	Weisburg	C5	39.217960	-85.045940
751	Richmondian	C5	Waynesville	Blanchester	OH	Clinton	Blanchester	C5	39.238170	-84.022960
752	Richmondian	C5	Whitewater		IN	Dearborn	Weisburg	C5	39.215931	-85.045151
753	Richmondian	C5	Waynesville	Blanchester	IN	Ripley	Versailles	C5	39.080720	-85.250430
754	Richmondian	C5	Waynesville		OH	Warren	Waynesville	C5	39.528390	-84.119850
755	Richmondian	C5	Waynesville		IN	Dearborn	Weisburg	C5	39.215931	-85.045151
756	Richmondian	C5	Waynesville		OH	Clinton	Clarksville	C5	39.387960	-83.924820
757	Richmondian	C6	Elkhorn		IN	Ripley	Versailles	C6	39.080440	-85.249730
758	Richmondian	C5	Waynesville	Blanchester	OH	Butler		C5	39.503020	-84.759220
759	Richmondian	C5	Saluda		OH	Clinton	Wilmington	C5	39.458349	-83.911189
760	Richmondian	C6	Elkhorn		OH	Preble		C6	39.654130	-84.647670
761	Richmondian	C6	Elkhorn		IN	Ripley	Versailles	C6	39.081030	-85.251026
762	Richmondian	C6	Elkhorn		OH	Preble	Morning Sun	C6	39.592356	-84.737397
763	Richmondian	C6	Elkhorn		OH	Clinton	Wilmington	C6	39.476667	-83.894444
764	Richmondian	C6	Whitewater	Upper Whitewater	IN	Ripley	Osgood	C6	39.161396	-85.307667
765	Richmondian	C6	Elkhorn		IN	Wayne	Richmond	C6	39.759790	-84.907490
766	Richmondian	C6	Elkhorn		OH	Preble	Eaton	C6	39.744221	-84.636467
767	Richmondian	C5	Waynesville		OH	Warren	Waynesville	C5	39.530620	-84.113420
768	Richmondian	C5	Waynesville		IN	Dearborn	Weisburg	C5	39.215931	-85.045151
769	Maysvillian	C1	Clays Ferry		KY	Marion		C1	37.58577	-85.07163
770	Maysvillian	C2	Fairview	Mt. Hope	OH	Hamilton	Bald Knob	C2	39.121726	-84.547444
771	Maysvillian	C2	Fairview	Mt. Hope	OH	Hamilton	Dent	C2	39.185840	-84.651360
772	Maysvillian	C2	Fairview	Mt. Hope	KY	Boone	Eljahs Creek	C2	39.102230	-84.686870
773	Maysvillian	C2	Fairview	Mt. Hope	IN	Dearborn	Guilford	C2	39.167990	-84.911890
774	Maysvillian	C2	Fairview	Mt. Hope	OH	Hamilton	Mt. Airy	C2	39.164850	-84.573880
775	Maysvillian	C2	Fairview	Mt. Hope	KY	Campbell	Newport	C2	39.091340	-84.495700
776	Maysvillian	C2	Fairview	Mt. Hope	KY	Kenton	Covington	C2	39.070990	-84.510200
777	Maysvillian	C2	Bellevue		OH	Hamilton		C2	39.29655	-84.4043
778	Maysvillian	C2	Calloway Creek		KY	Washington		C2	37.66092	-85.17058
779	Maysvillian	C2	Fairview		OH	Campbell		C2	39.0059	-84.4501
780	Maysvillian	C2	Fairview		KY	Kenton		C2	39.02778	-84.51055
781	Maysvillian	C2	Fairview		KY	Mason		C2	38.68263	-83.79007
782	Maysvillian	C3	Corryville		OH	Hamilton		C3	39.29655	-84.4043
783	Maysvillian	C2	McMillan	Bellevue	OH	Hamilton	Bald Knob	C2	39.121726	-84.547444
784	Maysvillian	C2	Fairview	Fairmount	OH	Hamilton	Barrsville	C2	39.123700	-84.551890
785	Maysvillian	C2	Fairview	Fairmount	OH	Hamilton	Cincinnati	C2	39.139722	-84.502778
786	Maysvillian	C2	Fairview	Fairmount	OH	Hamilton	Cincinnati	C2	39.144722	-84.683056
787	Maysvillian	C2	McMillan	Bellevue	OH	Hamilton	Clifton	C2	39.150070	-84.518040
788	Maysvillian	C2	Fairview	Fairmount	OH	Hamilton	Cincinnati	C2	39.161938	-84.456680
789	Maysvillian	C2	McMillan	Bellevue	OH	Hamilton	Cincinnati	C2	39.134444	-84.520000
790	Maysvillian	C2	McMillan	Bellevue	OH	Clermont	Bethel	C2	39.016080	-84.090340
791	Maysvillian	C2	McMillan	Bellevue	OH	Hamilton	Cincinnati	C2	39.122778	-84.523056
792	Maysvillian	C2	McMillan	Bellevue	IN	Ripley	Friendship	C2	38.98339	-85.1666227
793	Maysvillian	C2	Fairview		OH	Hamilton	Cincinnati	C2	39.136944	-84.538333
794	Maysvillian	C2	McMillan	Bellevue	IN	Jefferson	Madison	C2	38.735860	-85.379880
795	Maysvillian	C2	McMillan	Bellevue	IN	Jefferson	Madison	C2	38.749233	-85.376783
796	Maysvillian	C2	McMillan	Bellevue	IN	Jefferson	Madison	C2	38.740680	-85.398102
797	Maysvillian	C2	McMillan	Bellevue	OH	Hamilton	Cincinnati	C2	39.126667	-84.501667

Appendix 1. Species distribution data

741	Bulls run
742	Camden
743	Flat Fork Falls
744	Garr Hill
745	Harper's Branch, N from Oldenburg
746	Lebanon
747	Opp St. Marys of Rx Hamburg-Oldenburg
748	Penquite Hollow
749	RR cuts 14-15
750	RR cuts 14-15 of Big 4 RR, Weisburg IN
751	Stone lick ck, 3 mi W of Blanchesters
752	upper end of Tanners Ck
753	Wash bank, Versailles
754	Waynesville
755	Weisburg to Guiliford area
756	
757	cut along Cedar Creek, near Versailles
758	Bulls Run
759	Hales Branch of Dutch Ck
760	Beasleys Cr
761	Cedar Ck. N of Versailles
762	Creek Just South of Morning Sun
763	Dutch Ck
764	Exposures 3.5 mi N of Osgood
765	Short Ck
766	Upper exposure
767	Creek W of Waynesville
768	
769	Two roadcuts on both sides of US Route 68, 0.4 and 0.9 miles west of intersection with Kentucky State Route 243
770	Bald Knob, Cincinnati
771	Dent
772	Eljahs Creek
773	Guilford
774	Mt Airy Forest, NW Cincinnati
775	Newport
776	Scholsser's Quarry, Covington
777	Hillside exposure at Trammel Fossil Park at north end of Tramway Road in Sharonville
778	Roadcut on both sides of US Route 150, beginning 0.1 mile west of Perryville Loop Road and 0.7 miles west of intersection with Kentucky State Route 2758 (Simmstown Road), and continuing for 0.9 miles east
779	Roadcut on northeast side of AA highway (Kentucky State Route 9), 1.4 miles west of US Route 27 overpass
780	Roadcut on northeast side of Mason Road, 0.2 miles southeast of intersection with Taylor Mill Road
781	Roadcuts on both sides of new US Route 62 and 68, east of Maysville and beginning 0.3 miles south of bridge over Ohio River
782	Hillside exposure at Trammel Fossil Park at north end of Tramway Road in Sharonville
783	Bald Knob, Cincinnati
784	Barrsville
785	Bethesda Ave.
786	Bridgetown Rd Quarry, Cincinnati
787	Clifton
788	Clifton and Eurming st
789	Clifton and Probasco St, Cincinnati
790	Clover Creek near Bethel
791	Emming St, Cincinnati
792	Friendship
793	hill cut on Beeker St. off Hopple Rd. NW of Hopple St.
794	Madison
795	Madison-421S
796	Mariemont Quarry, Madison (or Cincy, OH)
797	McMillan & Reading

Appendix 1. Species distribution data

798	Orthida	Platystrophiidae	<i>Platystrophia</i>	<i>laticosta</i>	CiMNH	31099	
799	Orthida	Platystrophiidae	<i>Platystrophia</i>	<i>laticosta</i>	CiMNH	31092	
800	Orthida	Platystrophiidae	<i>Platystrophia</i>	<i>laticosta</i>	MUGM	23173	
801	Orthida	Platystrophiidae	<i>Platystrophia</i>	<i>laticosta</i>	CiMNH	18406	
802	Orthida	Platystrophiidae	<i>Platystrophia</i>	<i>laticosta</i>	CiMNH	3407	
803	Orthida	Platystrophiidae	<i>Platystrophia</i>	<i>laticosta</i>	CiMNH	3056	
804	Orthida	Platystrophiidae	<i>Platystrophia</i>	<i>laticosta</i>	CiMNH	22566	
805	Orthida	Platystrophiidae	<i>Platystrophia</i>	<i>laticosta</i>	Field		
806	Orthida	Platystrophiidae	<i>Platystrophia</i>	<i>laticosta</i>	Holland and Patzkowsky 2007		72985
807	Orthida	Platystrophiidae	<i>Platystrophia</i>	<i>laticosta</i>	Holland and Patzkowsky 2007		72888
808	Orthida	Platystrophiidae	<i>Platystrophia</i>	<i>laticosta</i>	Holland and Patzkowsky 2007		72721
809	Orthida	Platystrophiidae	<i>Platystrophia</i>	<i>laticosta</i>	Holland and Patzkowsky 2007		72790
810	Orthida	Platystrophiidae	<i>Platystrophia</i>	<i>laticosta</i>	Holland and Patzkowsky 2007		72706
811	Orthida	Platystrophiidae	<i>Platystrophia</i>	<i>laticosta</i>	Holland and Patzkowsky 2007		73074
812	Orthida	Platystrophiidae	<i>Platystrophia</i>	<i>laticosta</i>	Holland and Patzkowsky 2007		72701
813	Orthida	Platystrophiidae	<i>Platystrophia</i>	<i>laticosta</i>	CiMNH	20725	
814	Orthida	Platystrophiidae	<i>Platystrophia</i>	<i>laticosta</i>	CiMNH	16543	
815	Orthida	Platystrophiidae	<i>Platystrophia</i>	<i>laticosta</i>	CiMNH	18273	
816	Orthida	Platystrophiidae	<i>Platystrophia</i>	<i>laticosta</i>	CiMNH	8574	
817	Orthida	Platystrophiidae	<i>Platystrophia</i>	<i>laticosta</i>	Field		
818	Orthida	Platystrophiidae	<i>Platystrophia</i>	<i>laticosta</i>	CiMNH		
819	Orthida	Platystrophiidae	<i>Platystrophia</i>	<i>laticosta</i>	CiMNH	27795	
820	Orthida	Platystrophiidae	<i>Platystrophia</i>	<i>laticosta</i>	Oldroyd, PhD, 1978		0-2m
821	Orthida	Platystrophiidae	<i>Platystrophia</i>	<i>laticosta</i>	CiMNH	28697	
822	Orthida	Platystrophiidae	<i>Platystrophia</i>	<i>laticosta</i>	CiMNH	28690	
823	Orthida	Platystrophiidae	<i>Platystrophia</i>	<i>laticosta</i>	CiMNH		
824	Orthida	Platystrophiidae	<i>Platystrophia</i>	<i>laticosta</i>	Roy H. Reinhart, 1977		Stop 5
825	Orthida	Platystrophiidae	<i>Platystrophia</i>	<i>laticosta</i>	CiMNH	27771	
826	Orthida	Platystrophiidae	<i>Platystrophia</i>	<i>laticosta</i>	MUGM	11318	
827	Orthida	Platystrophiidae	<i>Platystrophia</i>	<i>laticosta</i>	Holland Ph. D, 1990		
828	Orthida	Platystrophiidae	<i>Platystrophia</i>	<i>laticosta</i>	CiMNH	27850	
829	Orthida	Platystrophiidae	<i>Platystrophia</i>	<i>laticosta</i>	Richard Hicklin, MS, 1933		Station 6-K
830	Orthida	Platystrophiidae	<i>Platystrophia</i>	<i>laticosta</i>	MUGM	23902	
831	Orthida	Platystrophiidae	<i>Platystrophia</i>	<i>laticosta</i>	Holland and Patzkowsky 2007		72993
832	Orthida	Platystrophiidae	<i>Platystrophia</i>	<i>laticosta</i>	Holland and Patzkowsky 2007		72685
833	Orthida	Platystrophiidae	<i>Platystrophia</i>	<i>laticosta</i>	MUGM	15981	
834	Orthida	Platystrophiidae	<i>Platystrophia</i>	<i>laticosta</i>	MUGM	15769	
835	Orthida	Platystrophiidae	<i>Platystrophia</i>	<i>laticosta</i>	CiMNH	21773	
836	Orthida	Platystrophiidae	<i>Platystrophia</i>	<i>laticosta</i>	MUGM	23174	
837	Orthida	Platystrophiidae	<i>Platystrophia</i>	<i>laticosta</i>	CiMNH	20628	
838	Orthida	Platystrophiidae	<i>Platystrophia</i>	<i>laticosta</i>	CiMNH	28330	
839	Orthida	Platystrophiidae	<i>Platystrophia</i>	<i>laticosta</i>	MUGM	23183	
840	Orthida	Platystrophiidae	<i>Platystrophia</i>	<i>laticosta</i>	MUGM	23100	
841	Orthida	Platystrophiidae	<i>Platystrophia</i>	<i>moritura</i>	CiMNH	27523	
842	Orthida	Platystrophiidae	<i>Platystrophia</i>	<i>moritura</i>	Field		IN-FR-0005
843	Orthida	Platystrophiidae	<i>Platystrophia</i>	<i>moritura</i>	CiMNH	12006	
844	Orthida	Platystrophiidae	<i>Platystrophia</i>	<i>moritura</i>	CiMNH	20751	
845	Orthida	Platystrophiidae	<i>Platystrophia</i>	<i>moritura</i>	CiMNH	28610	
846	Orthida	Platystrophiidae	<i>Platystrophia</i>	<i>moritura</i>	CiMNH	28486	
847	Orthida	Platystrophiidae	<i>Platystrophia</i>	<i>moritura</i>	CiMNH	27500	
848	Orthida	Platystrophiidae	<i>Platystrophia</i>	<i>moritura</i>	CiMNH	29746	
849	Orthida	Platystrophiidae	<i>Platystrophia</i>	<i>moritura</i>	CiMNH	12276	
850	Orthida	Platystrophiidae	<i>Platystrophia</i>	<i>moritura</i>	CiMNH	20732	
851	Orthida	Platystrophiidae	<i>Platystrophia</i>	<i>moritura</i>	CiMNH	20704	
852	Orthida	Platystrophiidae	<i>Platystrophia</i>	<i>moritura</i>	CiMNH	6236	
853	Orthida	Platystrophiidae	<i>Platystrophia</i>	<i>moritura</i>	CiMNH	28326	
854	Orthida	Platystrophiidae	<i>Platystrophia</i>	<i>moritura</i>	CiMNH	2164	

Appendix 1. Species distribution data

798	Maysvillian	C2	Fairview	Fairmount	OH	Hamilton	Mt. Airy	C2	39.164850	-84.573880
799	Maysvillian	C2	Fairview	Fairmount	OH	Hamilton	Mt. Airy	C2	39.191450	-84.570300
800	Maysvillian	C2	Fairview	Fairmount	OH	Hamilton	Cincinnati	C2	39.130892	-84.711058
801	Maysvillian	C2	McMillan	Bellevue	OH	Hamilton	Cincinnati	C2	39.130892	-84.711058
802	Maysvillian	C2	McMillan	Bellevue	OH	Clermont	Goshen	C2	39.235290	-84.171780
803	Maysvillian	C2	Fairview	Fairmount	OH	Hamilton	Price Hill	C2	39.110000	-84.575840
804	Maysvillian	C2	Fairview	Fairmount	OH	Hamilton	Cincinnati	C2	39.113889	-84.658056
805	Maysvillian	C2	McMillan	Bellevue	KY	Kenton		C2	39.024516	-84.508550
806	Maysvillian	C2	Bellevue		OH	Hamilton		C2	39.29655	-84.4043
807	Maysvillian	C2	Bellevue		OH	Clermont		C2	39.17193	-84.12193
808	Maysvillian	C2	Calloway Creek		KY	Lincoln		C2	37.43403	-84.84982
809	Maysvillian	C2	Fairview		KY	Kenton		C2	39.02778	-84.51055
810	Maysvillian	C2	Calloway Creek		KY	Lincoln		C2	37.44852	-84.83527
811	Maysvillian	C2	Fairview		KY	Mason		C2	38.68263	-83.79007
812	Maysvillian	C2	Calloway Creek		KY	Lincoln		C2	37.46393	-84.82255
813	Maysvillian	C3	McMillan	Corryville	OH	Hamilton	Cincinnati	C3	39.162040	-84.456990
814	Maysvillian	C3	McMillan	Mt. Auburn	OH	Hamilton	College Hill	C3	39.202160	-84.547050
815	Maysvillian	C3	McMillan	Corryville	OH	Brown	Russellville	C3	38.849670	-83.748870
816	Maysvillian	C3	McMillan	Corryville	OH	Montgomery	Fairview	C3	39.786360	-84.220970
817	Maysvillian	C3	McMillan	Mt. Auburn	KY	Washington	Fredericktown	C3	37.762666	-85.339433
818	Maysvillian	C3	McMillan	Mt. Auburn	OH	Hamilton	Nassau	C3	39.118333	-84.495833
819	Maysvillian	C3	McMillan	Corryville	OH	Hamilton	Cincinnati	C3	39.203056	-84.548056
820	Maysvillian	C3	Dillsboro	Corryville	IN	Jefferson	Madison	C3	38.7511	-85.1417
821	Maysvillian	C3	McMillan	Mt. Auburn	OH	Hamilton	Cincinnati	C3	39.302500	-84.408333
822	Maysvillian	C3	McMillan	Mt. Auburn	OH	Hamilton	Cincinnati	C3	39.128056	-84.526389
823	Maysvillian	C3	McMillan	Corryville	OH	Hamilton	Cincinnati	C3	39.147778	-84.597500
824	Maysvillian	C3	McMillan	Corryville/Mt. Auburn	OH	Butler	Middletown	C3	39.5	-84.4167
825	Maysvillian	C3	McMillan	Corryville	OH	Hamilton	Cincinnati	C3	39.128056	-84.526667
826	Maysvillian	C3	McMillan	Corryville	OH	Hamilton	Cincinnati	C3	39.126667	-84.501667
827	Maysvillian	C3	Mt. Auburn		KY	Trimble	Bedford	C3	38.6022	-85.2736
828	Maysvillian	C3	McMillan	Corryville	KY	Boone	Walton	C3	38.875580	-84.610120
829	Maysvillian	C3	McMillan	Mt. Auburn	KY	Fleming	Flemingsburg	C3	38.3694	-83.7375
830	Maysvillian	C3	McMillan	Corryville	OH	Hamilton	Cincinnati	C3	39.161938	-84.456680
831	Maysvillian	C3	Corryville		OH	Hamilton		C3	39.29655	-84.4043
832	Maysvillian	C4	Reba		KY	Nelson		C4	37.76737	-85.35557
833	Richmondian	C5	Waynesville		IN	Franklin		C5	39.484600	-84.064033
834	Richmondian	C5	Waynesville		OH	Warren		C5	39.480860	-84.047570
835	Richmondian	C5	Whitewater		OH	Montgomery	Centerville	C5	39.628360	-84.159320
836	Richmondian	C5	Waynesville		IN	Dearborn	Weisburg	C5	39.215931	-85.045151
837	Richmondian	C5	Waynesville		OH	Warren	Lebanon	C5	39.435220	-84.202900
838	Richmondian	C5	Waynesville	Blanchester	OH	Clermont	Blanchester	C5	39.238170	-84.022960
839	Richmondian	C5	Waynesville		IN	Dearborn	Weisburg	C5	39.215931	-85.045151
840	Richmondian	C5	Waynesville		OH	Warren	Waynesville	C5	39.529710	-84.086850
841	Richmondian	C5	Whitewater		IN	Wayne	Richmond	C5	39.828760	-84.890320
842	Richmondian	C5	Liberty		IN	Franklin	Brookville	C5	39.341966	-84.953650
843	Richmondian	C6	Elkhorn		OH	Preble	Eaton	C6	39.740833	-84.638056
844	Richmondian	C6	Elkhorn		IN	Wayne	Boston	C6	39.741170	-84.851960
845	Richmondian	C6	Elkhorn		OH	Preble	Morning Sun	C6	39.591870	-84.741360
846	Richmondian	C6	Elkhorn		IN	Ripley	Versailles	C6	39.080440	-85.249730
847	Richmondian	C6	Elkhorn		IN	Wayne	Richmond	C6	39.771840	-84.879170
848	Richmondian	C6	Elkhorn		IN	Ripley	Versailles	C6	39.080590	-85.229940
849	Richmondian	C6	Elkhorn		IN	Franklin	Hamburg	C6	39.380700	-85.250890
850	Richmondian	C6	Elkhorn		OH	Preble	Morning Sun	C6	39.596390	-84.737110
851	Richmondian	C6	Elkhorn		IN	Wayne	Richmond	C6	39.828870	-84.890290
852	Richmondian	C6	Elkhorn		IN	Wayne	Richmond	C6	39.759790	-84.907490
853	Richmondian	C6	Elkhorn		OH	Clermont	Blanchester	C6	39.238170	-84.022960
854	Richmondian	C6	Elkhorn		IN	Wayne	Richmond	C6	39.834900	-84.896050

Appendix 1. Species distribution data

798	Mt Airy Forest, NW Cincinnati
799	Mt. Airy
800	Muddy Ck.
801	Muddy Creek (near Cincy?)
802	O'Bannon Ck, 1/2 mi W of Goshen
803	Prices Quarry, Price Hill
804	Rapid Run, Cincinnati
805	Taylor Mill Rd.
806	Hillside exposure at Trammel Fossil Park at north end of Tramway Road in Sharonville
807	Multiple streamside exposures along Stonelick Creek, downstream from Ohio State Route 131 bridge. Private property; permission required for entry.
808	Roadcut on east side of US Route 127, 3.1 miles south of intersection with Kentucky State Route 78 at Hustonville, and 0.5 mile north of Lincoln-Casey county line
809	Roadcut on northeast side of Mason Road, 0.2 miles southeast of intersection with Taylor Mill Road
810	Roadcut on west side of US Route 127, 1.7 miles north of Lincoln-Casey county line, and 1.9 miles south of intersection with Kentucky State Route 78 at Hustonville
811	Roadcuts on both sides of new US Route 62 and 68, east of Maysville and beginning 0.3 miles south of bridge over Ohio River
812	Roadcuts on both sides of US Route 127, 1.5 miles north of Lincoln-Casey county line, and 2.1 miles south of intersection with Kentucky State Route 78 at Hustonville
813	Cincinnati
814	College Hill, greater Cincy
815	Eagle Ck at covered bridge, 4 mi below Russelville
816	Fairview flats and slopes near incline
817	Fredericktown
818	Gilbert Ave near Nassau, Cincinnati
819	Hamilton Ave, road cut near Mill Rd, Cincinnati
820	Large Roadcut across U. S. Highway 421 from cemetery, 0.9 miles north of Madison, Indiana, courthouse. NW 14 NE 1/4 sect. 35, T4N, R10E, Madison West quadrangle, Indiana-Kentucky
821	McMillan St near Hershede's, Cincinnati
822	McMillan St, Cincinnati
823	near Harrison Ave, Cincinnati
824	Railroad cut on armco steel property in Oneida (permission required)
825	Ravine St. near McMillan, Cincinnati
826	Reading Rd and McMillan
827	U. S. Route 42, 2.5 miles east of U.S. Route 421 in Bedford
828	Walton, L&R RR cut
829	
830	
831	Hillside exposure at Trammel Fossil Park at north end of Tramway Road in Sharonville
832	Roadcut on west side of US Route 150, 0.6 miles west of Nelson / Washington county line
833	Brookville Lake Causeway, Roadcut on hill west of lake
834	Caesars Creek damsite Excavation for spillway
835	Centerville
836	cut 13
837	North of Lebanon
838	Upper Stonelick Creek and Hunter's Creek, near Blanchester
839	
840	
841	Richmond
842	South Gate Hill
843	7 Mile Ck, near Eaton
844	Boston
845	Creek at Morning Sun
846	cut along Cedar Creek, near Versailles
847	Elkhorn Creek, Richmond
848	Fallen Timers, Versailles
849	Hamburg
850	Morning Sun
851	Richmond, old quarries
852	Short Ck, 2 mi S of Richmond
853	Upper Stonelick Creek and Hunter's Creek, near Blanchester
854	Whitewater River, Richmond

Appendix 1. Species distribution data

855	Orthida	Platystrophiidae	<i>Platystrophia</i>	<i>moritura</i>	MUGM	10550	
856	Orthida	Platystrophiidae	<i>Platystrophia</i>	<i>morrowensis</i>	CiMNH	17412	
857	Orthida	Platystrophiidae	<i>Platystrophia</i>	<i>morrowensis</i>	CiMNH	20624	
858	Orthida	Platystrophiidae	<i>Platystrophia</i>	<i>ponderosa</i>	MUGM	24121	1.34A5
859	Orthida	Platystrophiidae	<i>Platystrophia</i>	<i>ponderosa</i>	MUGM	24044	3.35C1
860	Orthida	Platystrophiidae	<i>Platystrophia</i>	<i>ponderosa</i>	MUGM	24058	3.39L
861	Orthida	Platystrophiidae	<i>Platystrophia</i>	<i>ponderosa</i>	MUGM	24052	3.39I
862	Orthida	Platystrophiidae	<i>Platystrophia</i>	<i>ponderosa</i>	MUGM	23961	1.51M1
863	Orthida	Platystrophiidae	<i>Platystrophia</i>	<i>ponderosa</i>	MUGM	24031	3.26K
864	Orthida	Platystrophiidae	<i>Platystrophia</i>	<i>ponderosa</i>	OSU	23954	
865	Orthida	Platystrophiidae	<i>Platystrophia</i>	<i>ponderosa</i>	MUGM	24030	3.26J
866	Orthida	Platystrophiidae	<i>Platystrophia</i>	<i>ponderosa</i>	MUGM	24072	3.50R2
867	Orthida	Platystrophiidae	<i>Platystrophia</i>	<i>ponderosa</i>	CiMNH	3424	
868	Orthida	Platystrophiidae	<i>Platystrophia</i>	<i>ponderosa</i>	OSU	24117	
869	Orthida	Platystrophiidae	<i>Platystrophia</i>	<i>ponderosa</i>	MUGM	23945	1.46A3
870	Orthida	Platystrophiidae	<i>Platystrophia</i>	<i>ponderosa</i>	OSU	23945	
871	Orthida	Platystrophiidae	<i>Platystrophia</i>	<i>ponderosa</i>	CiMNH	13921	
872	Orthida	Platystrophiidae	<i>Platystrophia</i>	<i>ponderosa</i>	CiMNH	3518	
873	Orthida	Platystrophiidae	<i>Platystrophia</i>	<i>ponderosa</i>	MUGM	23999	3.24E
874	Orthida	Platystrophiidae	<i>Platystrophia</i>	<i>ponderosa</i>	MUGM	24020	
875	Orthida	Platystrophiidae	<i>Platystrophia</i>	<i>ponderosa</i>	MUGM	23930	1.26D1
876	Orthida	Platystrophiidae	<i>Platystrophia</i>	<i>ponderosa</i>	MUGM	23991	3.18K1
877	Orthida	Platystrophiidae	<i>Platystrophia</i>	<i>ponderosa</i>	MUGM	23926	1.25O1
878	Orthida	Platystrophiidae	<i>Platystrophia</i>	<i>ponderosa</i>	MUGM	23928	1.26A3
879	Orthida	Platystrophiidae	<i>Platystrophia</i>	<i>ponderosa</i>	MUGM	24006	3.25M
880	Orthida	Platystrophiidae	<i>Platystrophia</i>	<i>ponderosa</i>	MUGM	24054	3.35C2
881	Orthida	Platystrophiidae	<i>Platystrophia</i>	<i>ponderosa</i>	CiMNH	20783	
882	Orthida	Platystrophiidae	<i>Platystrophia</i>	<i>ponderosa</i>	CiMNH	8608	
883	Orthida	Platystrophiidae	<i>Platystrophia</i>	<i>ponderosa</i>	OSU	23970	
884	Orthida	Platystrophiidae	<i>Platystrophia</i>	<i>ponderosa</i>	MUGM	23255	
885	Orthida	Platystrophiidae	<i>Platystrophia</i>	<i>ponderosa</i>	CiMNH	12257	
886	Orthida	Platystrophiidae	<i>Platystrophia</i>	<i>ponderosa</i>	CiMNH	3404	
887	Orthida	Platystrophiidae	<i>Platystrophia</i>	<i>ponderosa</i>	OSU	24119	
888	Orthida	Platystrophiidae	<i>Platystrophia</i>	<i>ponderosa</i>	MUGM	24029	3.26H
889	Orthida	Platystrophiidae	<i>Platystrophia</i>	<i>ponderosa</i>	CiMNH	3056	
890	Orthida	Platystrophiidae	<i>Platystrophia</i>	<i>ponderosa</i>	OSU	23967	
891	Orthida	Platystrophiidae	<i>Platystrophia</i>	<i>ponderosa</i>	MUGM	24001	3.25G
892	Orthida	Platystrophiidae	<i>Platystrophia</i>	<i>ponderosa</i>	MUGM	23977	3.10L
893	Orthida	Platystrophiidae	<i>Platystrophia</i>	<i>ponderosa</i>	MUGM	24061	3.48A2
894	Orthida	Platystrophiidae	<i>Platystrophia</i>	<i>ponderosa</i>	OSU	24061	
895	Orthida	Platystrophiidae	<i>Platystrophia</i>	<i>ponderosa</i>	MUGM	24043	3.29V2
896	Orthida	Platystrophiidae	<i>Platystrophia</i>	<i>ponderosa</i>	OSU	24075	
897	Orthida	Platystrophiidae	<i>Platystrophia</i>	<i>ponderosa</i>	MUGM	23965	3.8A26
898	Orthida	Platystrophiidae	<i>Platystrophia</i>	<i>ponderosa</i>	MUGM	24075	3.59A4
899	Orthida	Platystrophiidae	<i>Platystrophia</i>	<i>ponderosa</i>	OSU	23963	
900	Orthida	Platystrophiidae	<i>Platystrophia</i>	<i>ponderosa</i>	MUGM	23972	3.10H7
901	Orthida	Platystrophiidae	<i>Platystrophia</i>	<i>ponderosa</i>	MUGM	24065	3.50A4
902	Orthida	Platystrophiidae	<i>Platystrophia</i>	<i>ponderosa</i>	MUGM	24071	3.50B5
903	Orthida	Platystrophiidae	<i>Platystrophia</i>	<i>ponderosa</i>	MUGM	24046	3.29O1
904	Orthida	Platystrophiidae	<i>Platystrophia</i>	<i>ponderosa</i>	OSU	24065	
905	Orthida	Platystrophiidae	<i>Platystrophia</i>	<i>ponderosa</i>	MUGM	34035	3.29D4
906	Orthida	Platystrophiidae	<i>Platystrophia</i>	<i>ponderosa</i>	OSU	23956	
907	Orthida	Platystrophiidae	<i>Platystrophia</i>	<i>ponderosa</i>	Field		
908	Orthida	Platystrophiidae	<i>Platystrophia</i>	<i>ponderosa</i>	Field		
909	Orthida	Platystrophiidae	<i>Platystrophia</i>	<i>ponderosa</i>	Field		
910	Orthida	Platystrophiidae	<i>Platystrophia</i>	<i>ponderosa</i>	MUGM	29440	
911	Orthida	Platystrophiidae	<i>Platystrophia</i>	<i>ponderosa</i>	MUGM	24041	3.29K1

Appendix 1. Species distribution data

855	Richmondian	C6	Elkhorn		OH	Preble	Eaton	C6	39.744221	-84.636467
856	Maysvillian	C3	McMillan	Corryville	OH	Hamilton	Cincinnati	C3	39.162040	-84.456990
857	Maysvillian	C3	McMillan	Corryville	OH	Hamilton	Cincinnati	C3	39.135278	-84.508889
858	Maysvillian	C2	McMillan	Bellevue	OH	Warren	Morrow	C2	39.347500	-84.131667
859	Maysvillian	C2	McMillan	Bellevue	KY	Shelby		C2	38.182483	-85.218133
860	Maysvillian	C2	McMillan	Bellevue	KY	Henry	Campbellsburg	C2	38.523790	-85.203890
861	Maysvillian	C2	McMillan	Bellevue	KY	Henry	Eminence	C2	38.369770	-85.180240
862	Maysvillian	C2	McMillan		OH	Adams	Decatur	C2	38.806667	-83.663889
863	Maysvillian	C2	McMillan	Bellevue	KY	Nelson	Bloomfield	C2	37.883510	-85.316340
864	Maysvillian	C2	McMillan	Bellevue	OH	Clermont		C2	39.041667	-84.075000
865	Maysvillian	C2	McMillan	Bellevue	KY	Nelson	Bloomfield	C2	37.848333	-85.332778
866	Maysvillian	C2	McMillan	Bellevue	KY	Trimble	Bedford	C2	38.593029	-85.318489
867	Maysvillian	C2	McMillan	Bellevue	IN	Jefferson	Madison	C2	38.733360	-85.417490
868	Maysvillian	C2	McMillan	Bellevue	IN	Jefferson	Madison	C2	38.758700	-85.412770
869	Maysvillian	C2	Fairview	Fairmount	OH	Clermont	Williamsburg	C2	39.100000	-84.016667
870	Maysvillian	C2	Fairview	Fairmount	OH	Clermont	Williamsburg	C2	38.993390	-84.060380
871	Maysvillian	C2	McMillan	Bellevue	OH	Clermont	Bethel	C2	39.016080	-84.090340
872	Maysvillian	C2	McMillan	Bellevue	KY	Kenton	Erlanger	C2	39.016790	-84.600760
873	Richmondian	C2	Bellevue		KY	Kenton	Bellevue	C2	39.106090	-84.478120
874	Maysvillian	C2	McMillan	Bellevue	KY	Nelson	Bardstown	C2	37.809100	-85.466450
875	Maysvillian	C2	Fairview	Fairmount	OH	Butler	Hamilton	C2	39.398698	-84.560695
876	Maysvillian	C2	Fairview	Fairmount	KY	Madison	Richmond	C2	37.747780	-84.294743
877	Maysvillian	C2	McMillan	Bellevue	OH	Hamilton	Hamilton	C2	39.110000	-84.575840
878	Maysvillian	C2	McMillan	Bellevue	OH	Butler	Hamilton	C2	39.786360	-84.220970
879	Maysvillian	C2	Fairview	Fairmount	KY	Washington	Springfield	C2	37.700000	-85.234167
880	Maysvillian	C2	McMillan	Bellevue	KY	Shelby	Taylorsville	C2	38.235556	-85.322500
881	Maysvillian	C2	McMillan	Bellevue	IN	Jefferson	Madison	C2	38.765110	-85.434720
882	Maysvillian	C2	McMillan	Bellevue	IN	Jefferson	Madison	C2	38.740680	-85.398102
883	Maysvillian	C2	McMillan	Bellevue	KY	Fleming		C2	38.364722	-83.815000
884	Maysvillian	C2	McMillan	Bellevue	OH	Hamilton	Cincinnati	C2	39.126667	-84.501667
885	Maysvillian	C2	Fairview	Fairmount	OH	Clermont	Mt. Carmel	C2	39.105650	-84.302960
886	Maysvillian	C2	McMillan	Bellevue	OH	Clermont	Goshen	C2	39.235290	-84.171780
887	Maysvillian	C2	McMillan	Bellevue	IN	Jefferson	Madison	C2	38.740680	-85.398102
888	Maysvillian	C2	McMillan	Bellevue	KY	Nelson	Bloomfield	C2	37.910000	-85.300000
889	Maysvillian	C2	Fairview	Fairmount	OH	Hamilton	Price Hill	C2	39.110000	-84.575840
890	Maysvillian	C2	McMillan	Bellevue	KY	Mason		C2	38.634722	-83.566111
891	Maysvillian	C2	McMillan	Bellevue	KY	Washington	Springfield	C2	37.685790	-85.221380
892	Maysvillian	C2	McMillan	Bellevue	KY	Fleming	Flemingsburg	C2	38.366667	-83.748611
893	Maysvillian	C2	McMillan	Bellevue	KY	Carrol	Carrollton	C2	38.680933	-85.178583
894	Maysvillian	C2	McMillan	Bellevue	KY	Carrol	Carrollton	C2	38.666667	-85.152500
895	Maysvillian	C2	McMillan	Bellevue	KY	Spencer	Wakefield	C2	37.971730	-85.309167
896	Maysvillian	C2	McMillan	Bellevue	KY	Nelson	Bardstown	C2	37.809100	-85.466930
897	Maysvillian	C2	McMillan	Bellevue	KY	Mason	Maysville	C2	38.630556	-83.750000
898	Maysvillian	C2	McMillan	Bellevue	KY	Nelson	Bardstown	C2	37.851166	-85.472964
899	Maysvillian	C2	McMillan	Bellevue	OH	Clermont	Williamsburg	C2	39.041667	-84.041667
900	Maysvillian	C2	McMillan	Bellevue	KY	Fleming	Tilton	C2	38.341667	-83.758333
901	Maysvillian	C2	McMillan	Bellevue	KY	Henry	Campbellsburg	C2	38.523790	-85.203890
902	Maysvillian	C2	McMillan	Bellevue	KY	Trimble	Bedford	C2	38.561200	-85.276443
903	Maysvillian	C2	McMillan	Bellevue	KY	Kenton	Waterford	C2	38.045556	-85.456389
904	Maysvillian	C2	McMillan	Bellevue	KY	Henry	Campbellsburg	C2	38.523530	-85.202900
905	Maysvillian	C2	McMillan	Bellevue	KY	Bullitt	Taylorsville	C2	38.046809	-85.359038
906	Maysvillian	C2	Fairview	Fairmount	OH	Brown	Georgetown	C2	38.963333	-83.911111
907	Maysvillian	C2	McMillan	Bellevue	KY	Kenton		C2	39.024516	-84.508550
908	Maysvillian	C2	McMillan		KY	Bullitt	Taylorsville	C2	38.044016	-85.283933
909	Maysvillian	C2	McMillan		KY	Bullitt	Taylorsville	C2	38.035100	-85.295766
910	Maysvillian	C2	McMillan	Bellevue	KY	Spencer	Wakefield	C2	37.971730	-85.309167
911	Maysvillian	C2	McMillan	Bellevue	KY	Spencer	Wilsonville	C2	38.126111	-85.406111

Appendix 1. Species distribution data

855
856 Cincinnati
857 Vine St Flats, Cincinnati
858 1st Ck (E. Ck)
859 2.1mi S. Taylorsville Rd.
860 2.5 mi N of Campbellsburg
861 2.5mi S of Eminence In "tank" at ford of lane
862 2nd Ck E of Decatur (Adas Run)
863 4.1mi S of Bloomfield 100 yds up Dugan's Run
864 A trib of East Fork
865 along rd 4.1 mi out of Bloomfield
866 Ck 3/4mi S of Pierre School
867 Clifty Ck (Big?)
868 Clifty Ck, Madison
869 Clover Lick Ck
870 Clover Lick Ck, Williamsburg
871 Cloverlick Ck, Bethel
872 Creek near Erlanger
873 Exp in Quarry
874 Exp on Main St. at High Grove and up stream along Bardstown
875 Exp opp. Herschedes-Cincinnati
876 Exp W. SW of Richmond
877 Exp Warsaw Ave Price Hill
878 Hill NSE Fairview incline
879 L&N cut 1.5mi NW of Springfield
880 L&N RR cuts
881 Madison @ Clifty Gorge
882 Mariemont Quarry, Madison (or Cincy, OH)
883 Martha Mills Ford, Fleming Ck
884 McMillan & Reading
885 Mt. Carmel
886 O'Bannon Ck, 1/2 mi W of Goshen
887 Old Quarry at Madison
888 One mile E of Bloomfield
889 Prices Quarry, Price Hill
890 Quarry along Lexington Pike
891 Quarry W of St. Rose Monestary
892 Rdcuts S of Flemmingsburg
893 Reservoir Hill
894 Reservoir Hill, Carrollton
895 RR cuts N of Wakefield
896 S Fork of Cox Ck, Headin Nazareth School, N of Bardstown
897 S of Maysville
898 S. fork of Cox Ck, headin Nazareth School N. of Bardstown
899 S. of Williamsburg
900 S. side Big hill S of Tilton
901 Sec along Ck.+rd. from t little Kentucky
902 Sec along Rd to Bedford from Little Kentucky River
903 Sec along stream 1mi W Waterford
904 Section along Ck and Rd from the Little Kentucky to Campbellsburg
905 Section up hill 1.5 mi NW Taylorsville
906 Shot Pouch Ck, Georgetown
907 Taylor Mill Rd.
908 Taylorsville Lake-1
909 Taylorsville Lake-3
910
911

Appendix 1. Species distribution data

912	Orthida	Platystrophiidae	<i>Platystrophia</i>	<i>ponderosa</i>	MUGM	23974	3.10H10
913	Orthida	Platystrophiidae	<i>Platystrophia</i>	<i>ponderosa</i>	MUGM	24053	3.39K3
914	Orthida	Platystrophiidae	<i>Platystrophia</i>	<i>ponderosa</i>	MUGM	23253	
915	Orthida	Platystrophiidae	<i>Platystrophia</i>	<i>ponderosa</i>	MUGM	23259	
916	Orthida	Platystrophiidae	<i>Platystrophia</i>	<i>ponderosa</i>	MUGM	23963	1.46C3
917	Orthida	Platystrophiidae	<i>Platystrophia</i>	<i>ponderosa</i>	MUGM	24045	3.29S
918	Orthida	Platystrophiidae	<i>Platystrophia</i>	<i>ponderosa</i>	Holland and Patzkowsky 2007		72988
919	Orthida	Platystrophiidae	<i>Platystrophia</i>	<i>ponderosa</i>	Holland and Patzkowsky 2007		72889
920	Orthida	Platystrophiidae	<i>Platystrophia</i>	<i>ponderosa</i>	Holland and Patzkowsky 2007		72751
921	Orthida	Platystrophiidae	<i>Platystrophia</i>	<i>ponderosa</i>	Holland and Patzkowsky 2007		72737
922	Orthida	Platystrophiidae	<i>Platystrophia</i>	<i>ponderosa</i>	Holland and Patzkowsky 2007		72797
923	Orthida	Platystrophiidae	<i>Platystrophia</i>	<i>ponderosa</i>	Holland and Patzkowsky 2007		72707
924	Orthida	Platystrophiidae	<i>Platystrophia</i>	<i>ponderosa</i>	Holland and Patzkowsky 2007		73024
925	Orthida	Platystrophiidae	<i>Platystrophia</i>	<i>ponderosa</i>	Holland and Patzkowsky 2007		72704
926	Orthida	Platystrophiidae	<i>Platystrophia</i>	<i>ponderosa</i>	Holland and Patzkowsky 2007		72699
927	Orthida	Platystrophiidae	<i>Platystrophia</i>	<i>ponderosa</i>	OSU	23939	
928	Orthida	Platystrophiidae	<i>Platystrophia</i>	<i>ponderosa</i>	Krumpolz, M.S., 1980		Unit 12
929	Orthida	Platystrophiidae	<i>Platystrophia</i>	<i>ponderosa</i>	CiMNH	18282	
930	Orthida	Platystrophiidae	<i>Platystrophia</i>	<i>ponderosa</i>	MUGM	29315	
931	Orthida	Platystrophiidae	<i>Platystrophia</i>	<i>ponderosa</i>	CiMNH	24697	
932	Orthida	Platystrophiidae	<i>Platystrophia</i>	<i>ponderosa</i>	Field		
933	Orthida	Platystrophiidae	<i>Platystrophia</i>	<i>ponderosa</i>	OSU	23927	
934	Orthida	Platystrophiidae	<i>Platystrophia</i>	<i>ponderosa</i>	CiMNH		
935	Orthida	Platystrophiidae	<i>Platystrophia</i>	<i>ponderosa</i>	MUGM	23969	3.10D1
936	Orthida	Platystrophiidae	<i>Platystrophia</i>	<i>ponderosa</i>	MUGM	23269	
937	Orthida	Platystrophiidae	<i>Platystrophia</i>	<i>ponderosa</i>	CiMNH	23881	
938	Orthida	Platystrophiidae	<i>Platystrophia</i>	<i>ponderosa</i>	MUGM	23268	
939	Orthida	Platystrophiidae	<i>Platystrophia</i>	<i>ponderosa</i>	MUGM	23923	1.24C3
940	Orthida	Platystrophiidae	<i>Platystrophia</i>	<i>ponderosa</i>	OSU	23923	
941	Orthida	Platystrophiidae	<i>Platystrophia</i>	<i>ponderosa</i>	CiMNH	18273	
942	Orthida	Platystrophiidae	<i>Platystrophia</i>	<i>ponderosa</i>	CiMNH	17274	
943	Orthida	Platystrophiidae	<i>Platystrophia</i>	<i>ponderosa</i>	Field		
944	Orthida	Platystrophiidae	<i>Platystrophia</i>	<i>ponderosa</i>	Field		
945	Orthida	Platystrophiidae	<i>Platystrophia</i>	<i>ponderosa</i>	CiMNH	28711	
946	Orthida	Platystrophiidae	<i>Platystrophia</i>	<i>ponderosa</i>	CiMNH	27795	
947	Orthida	Platystrophiidae	<i>Platystrophia</i>	<i>ponderosa</i>	Hay, H. B., Ph. D, 1981		
948	Orthida	Platystrophiidae	<i>Platystrophia</i>	<i>ponderosa</i>	Hay, H. B., Ph. D, 1981		
949	Orthida	Platystrophiidae	<i>Platystrophia</i>	<i>ponderosa</i>	Oldroyd, PhD, 1978		0-2m
950	Orthida	Platystrophiidae	<i>Platystrophia</i>	<i>ponderosa</i>	OSU	23947	
951	Orthida	Platystrophiidae	<i>Platystrophia</i>	<i>ponderosa</i>	Field		
952	Orthida	Platystrophiidae	<i>Platystrophia</i>	<i>ponderosa</i>	CiMNH	23880	
953	Orthida	Platystrophiidae	<i>Platystrophia</i>	<i>ponderosa</i>	CiMNH	20866	
954	Orthida	Platystrophiidae	<i>Platystrophia</i>	<i>ponderosa</i>	Field		
955	Orthida	Platystrophiidae	<i>Platystrophia</i>	<i>ponderosa</i>	Hay, H. B., Ph. D, 1981		
956	Orthida	Platystrophiidae	<i>Platystrophia</i>	<i>ponderosa</i>	Krumpolz, M.S., 1980		Unit 40
957	Orthida	Platystrophiidae	<i>Platystrophia</i>	<i>ponderosa</i>	Krumpolz, M.S., 1980		Unit 5
958	Orthida	Platystrophiidae	<i>Platystrophia</i>	<i>ponderosa</i>	CiMNH	3410	
959	Orthida	Platystrophiidae	<i>Platystrophia</i>	<i>ponderosa</i>	Hay, H. B., Ph. D, 1981		
960	Orthida	Platystrophiidae	<i>Platystrophia</i>	<i>ponderosa</i>	Roy H. Reinhart, 1977		Stop 5
961	Orthida	Platystrophiidae	<i>Platystrophia</i>	<i>ponderosa</i>	OSU	23968	
962	Orthida	Platystrophiidae	<i>Platystrophia</i>	<i>ponderosa</i>	Lee, B. G., M.S., 1974		Locality 5
963	Orthida	Platystrophiidae	<i>Platystrophia</i>	<i>ponderosa</i>	Holland Ph. D, 1990		
964	Orthida	Platystrophiidae	<i>Platystrophia</i>	<i>ponderosa</i>	Holland Ph. D, 1990		
965	Orthida	Platystrophiidae	<i>Platystrophia</i>	<i>ponderosa</i>	Hay, H. B., Ph. D, 1981		
966	Orthida	Platystrophiidae	<i>Platystrophia</i>	<i>ponderosa</i>	Holland Ph. D, 1990		
967	Orthida	Platystrophiidae	<i>Platystrophia</i>	<i>ponderosa</i>	Holland Ph. D, 1990		
968	Orthida	Platystrophiidae	<i>Platystrophia</i>	<i>ponderosa</i>	MUGM	23938	1.33D3

Appendix 1. Species distribution data

912	Maysvillian	C2	McMillan	Bellevue	KY	Fleming	Tilton	C2	38.341667	-83.758333
913	Maysvillian	C2	McMillan	Bellevue	KY	Henry	New Castle	C2	38.433170	-85.168720
914	Maysvillian	C2	McMillan	Bellevue	KY	Mason	Maysville	C2	38.630556	-83.750000
915	Maysvillian	C2	McMillan	Bellevue	IN	Jefferson	Madison	C2	38.744884	-85.423721
916	Maysvillian	C2	McMillan	Bellevue	OH	Clermont	Williamsburg	C2	39.041667	-84.041667
917	Maysvillian	C2	McMillan	Bellevue	KY	Kenton	Bellevue	C2	39.106090	-84.478120
918	Maysvillian	C2	Bellevue		OH	Hamilton		C2	39.29655	-84.4043
919	Maysvillian	C2	Bellevue		OH	Clermont		C2	39.17193	-84.12193
920	Maysvillian	C2	Grant Lake		KY	Washington		C2	37.66092	-85.17058
921	Maysvillian	C2	Calloway Creek		KY	Garrard		C2	37.58812	-84.47962
922	Maysvillian	C2	Bellevue		KY	Kenton		C2	39.02778	-84.51055
923	Maysvillian	C2	Calloway Creek		KY	Lincoln		C2	37.44852	-84.83527
924	Maysvillian	C2	Bellevue		KY	Mason		C2	38.68263	-83.79007
925	Maysvillian	C2	Calloway Creek		KY	Lincoln		C2	37.46393	-84.82255
926	Maysvillian	C2	Calloway Creek		KY	Marion		C2	37.58577	-85.07163
927	Maysvillian	C3	McMillan	Mt. Auburn	OH	Warren	Morrow	C3	39.014167	-84.131667
928	Maysvillian	C3	McMillan	Mt. Auburn	OH	Hamilton	Barnesburg	C3	39.2292	-84.62505
929	Maysvillian	C3	McMillan	Corryville	OH	Clermont	Bethel	C3	38.963590	-84.080930
930	Maysvillian	C3	McMillan	Mt. Auburn	OH	Butler	Hamilton	C3	39.786360	-84.220970
931	Maysvillian	C3	McMillan	Mt. Auburn	OH	Butler	Maud	C3	39.345500	-84.386500
932	Maysvillian	C3	McMillan	Mt. Auburn	KY	Madison		C3	37.709050	-84.314850
933	Maysvillian	C3	McMillan	Mt. Auburn	OH	Hamilton	Westwood	C3	39.148500	-84.599410
934	Maysvillian	C3	McMillan	Corryville	OH	Hamilton	Cincinnati	C3	39.162040	-84.456990
935	Maysvillian	C3	McMillan	Mt. Auburn	KY	Fleming	Sunset	C3	38.284760	-83.690830
936	Maysvillian	C3	McMillan	Mt. Auburn	OH	Hamilton	College Hill	C3	39.201660	-84.546590
937	Maysvillian	C3	McMillan	Mt. Auburn	OH	Hamilton	College Hill	C3	39.202160	-84.547050
938	Maysvillian	C3	McMillan	Mt. Auburn	OH	Warren	Ft. Ancient	C3	39.408067	-84.091500
939	Maysvillian	C3	McMillan	Mt. Auburn	OH	Butler	Hamilton	C3	39.270510	-84.570490
940	Maysvillian	C3	McMillan	Mt. Auburn	OH	Hamilton	Mount Healthy	C3	39.246780	-84.544650
941	Maysvillian	C3	McMillan	Corryville	OH	Brown	Russellville	C3	38.849670	-83.748870
942	Maysvillian	C3	McMillan	Mt. Auburn	KY	Boone	Florence	C3	38.998990	-84.626480
943	Maysvillian	C3	McMillan	Mt. Auburn	KY	Washington	Fredericktown	C3	37.723450	-85.281666
944	Maysvillian	C3	McMillan	Mt. Auburn	KY	Washington	Fredericktown	C3	37.762666	-85.339433
945	Maysvillian	C3	McMillan	Corryville	OH	Hamilton	College Hill	C3	39.053889	-84.536667
946	Maysvillian	C3	McMillan	Corryville	OH	Hamilton	Cincinnati	C3	39.203056	-84.548056
947	Maysvillian	C3	Brookville	Excello	OH	Butler	Trenton	C3	39.48	-84.41
948	Maysvillian	C3	Brookville	Excello	IN	Jefferson	Madison	C3	38.7511	-85.3
949	Maysvillian	C3	Dillsboro	Corryville	IN	Jefferson	Madison	C3	38.7511	-85.1417
950	Maysvillian	C3	McMillan	Mt. Auburn	OH	Warren	Morrow	C3	39.335556	-84.098333
951	Maysvillian	C3	McMillan	Mt. Auburn	KY	Lincoln		C3	37.577533	-84.610283
952	Maysvillian	C3	McMillan	Mt. Auburn	OH	Butler	Maud	C3	39.355180	-84.390480
953	Maysvillian	C3	McMillan	Corryville	OH	Hamilton	Cincinnati	C3	39.128056	-84.526389
954	Maysvillian	C3	McMillan	Corryville	KY	Washington		C3	37.764900	-85.353416
955	Maysvillian	C3	Brookville	Excello	IN	Dearborn	Dillsboro	C3	39.02	-85.04
956	Maysvillian	C3	McMillan	Mt. Auburn	OH	Hamilton	Dry Ridge	C3	39.2833	-84.6
957	Maysvillian	C3	McMillan	Mt. Auburn	OH	Hamilton	Forest Park	C3	39.2251	-84.5251
958	Maysvillian	C3	McMillan	Corryville	OH	Hamilton	Cincinnati	C3	39.134444	-84.574444
959	Maysvillian	C3	Brookville	Excello	IN	Jefferson	Madison	C3	38.7511	-85.1417
960	Maysvillian	C3	McMillan	Corryville/Mt. Auburn	OH	Butler	Middletown	C3	39.5	-84.4167
961	Maysvillian	C3	McMillan	Mt. Auburn	KY	Mason	Maysville	C3	38.469722	-83.755556
962	Maysvillian	C3	Grant Lake Limestone	Corryville/Mt. Auburn	OH	Brown	Georgetown	C3	38.87033	-83.9133
963	Maysvillian	C3	Mt. Auburn		KY	Washington	Fredericktown	C3	37.7692	-85.3569
964	Maysvillian	C3	Mt. Auburn		KY	Fleming	Flemingsburg	C3	38.4222	-83.7375
965	Maysvillian	C3	Grant Lake Limestone		OH	Adams	Manchester	C3	38.7	-83.59
966	Maysvillian	C3	Mt. Auburn		KY	Lincoln	Gilbert	C3	37.5736	-84.6136
967	Maysvillian	C3	Corryville		OH	Brown	Georgetown	C3	38.8722	-83.9167
968	Maysvillian	C3	McMillan	Mt. Auburn	OH	Butler	Westchester	C3	39.330250	-84.407341

Appendix 1. Species distribution data

912	
913	
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918	Hillside exposure at Trammel Fossil Park at north end of Tramway Road in Sharonville
919	Multiple streamside exposures along Stonelick Creek, downstream from Ohio State Route 131 bridge. Private property; permission required for entry.
920	Roadcut on both sides of US Route 150, beginning 0.1 mile west of Perryville Loop Road and 0.7 miles west of intersection with Kentucky State Route 2758 (Simmstown Road), and continuing for 0.9 miles east
921	Roadcut on north side of new Kentucky State Route 52, approximately 5.8 miles east of Lancaster
922	Roadcut on northeast side of Mason Road, 0.2 miles southeast of intersection with Taylor Mill Road
923	Roadcut on west side of US Route 127, 1.7 miles north of Lincoln-Casey county line, and 1.9 miles south of intersection with Kentucky State Route 78 at Hustonville
924	Roadcuts on both sides of new US Route 62 and 68, east of Maysville and beginning 0.3 miles south of bridge over Ohio River
925	Roadcuts on both sides of US Route 127, 1.5 miles north of Lincoln-Casey county line, and 2.1 miles south of intersection with Kentucky State Route 78 at Hustonville
926	Two roadcuts on both sides of US Route 68, 0.4 and 0.9 miles west of intersection with Kentucky State Route 243
927	2nd Ck, Morrow Oh area
928	Base of section at the southeast end of outcrop, 1.4 m higher than the level of the first lightpost on the east side of Blue Rock Road just northwest of the exit ramp from Cross Country Highway.
929	Bethel
930	between Hamilton and Middletown Rdcut on rt4 int. w/old rt4
931	Big Four cut, Maud
932	Bybee -2
933	C&O RR cut S of Westwood
934	Cincinnati
935	Ck 1mi S. of Sunset
936	College Hill
937	College Hill, greater Cincy
938	Cowen's run
939	Crk N. of Mt. Healthy
940	Crk. N of Mt. Healthy
941	Eagle Ck at covered bridge, 4 mi below Russelville
942	Florence
943	Fredericktown
944	Fredericktown
945	Groesbeck Rd, 1st cut on top near College Hill (greater Cincinnati)
946	Hamilton Ave, road cut near Mill Rd, Cincinnati
947	In Elk Creek less than 1 mile from the confluence with the Miami River near Trenton, OH
948	Jefferson Lake Spillway, east Route 421 on secondary roads
949	Large Roadcut across U. S. Highway 421 from cemetery, 0.9 miles north of Madison, Indiana, courthouse. NW 14 NE 1/4 sect. 35, T4N, R10E, Madison West quadrangle, Indiana-Kentucky
950	Lick Run, Morrow
951	Lincoln County Line
952	Maud
953	McMillan St (just E of Ravine St), Cincinnati
954	Nelson/Washington line
955	On Station Hollow Road just north of Route 50 at Dillsboro
956	On U.S. 27, 1.5 miles north of Interstate 275.
957	On Waycross Road, 0.4 miles north of intersection with Winton Road. Stream exposure south of culvert.
958	Orland Ave, just N of Harrison Ave, Cincinnati
959	Outcrops along Route 421 northeast of Madison, Indiana.
960	Railroad cut on armco steel property in Oneida (permission required)
961	Rd cuts // to Ck N ; to Maysville
962	Roadcut on north side of Ohio State Route 125, west of Georgetown and on east side of valley for white Oak Creek
963	Roadcut on south side of U. S. Route 150, 0.5 miles west of Nelson/Washington County line.
964	Roadcuts along Kentucky State Route 32, 1-1.2 miles south of Kentucky State Route 11.
965	Roadcuts along Route 136 and Isaac Creek from Manchester northward to the junction with Route 41
966	Roadcuts of U. S. Route 27, 0.8 miles south of Garrard/Lincoln County Line.
967	Roadcuts on Ohio State Route 125 on both sides of the Whiteoak Creek valley, 0.8 miles west of U. S. Route 68 in Georgetown
968	RR cut above westchester

Appendix 1. Species distribution data

969	Orthida	Platystrophiidae	<i>Platystrophia</i>	<i>ponderosa</i>	OSU	23938	
970	Orthida	Platystrophiidae	<i>Platystrophia</i>	<i>ponderosa</i>	OSU	24057	
971	Orthida	Platystrophiidae	<i>Platystrophia</i>	<i>ponderosa</i>	MUGM	24057	
972	Orthida	Platystrophiidae	<i>Platystrophia</i>	<i>ponderosa</i>	MUGM	23949	1.46C4
973	Orthida	Platystrophiidae	<i>Platystrophia</i>	<i>ponderosa</i>	Hay, H. B., Ph. D, 1981		
974	Orthida	Platystrophiidae	<i>Platystrophia</i>	<i>ponderosa</i>	OSU	23943	
975	Orthida	Platystrophiidae	<i>Platystrophia</i>	<i>ponderosa</i>	OSU	23944	
976	Orthida	Platystrophiidae	<i>Platystrophia</i>	<i>ponderosa</i>	Holland Ph. D, 1990		
977	Orthida	Platystrophiidae	<i>Platystrophia</i>	<i>ponderosa</i>	CiMNH		
978	Orthida	Platystrophiidae	<i>Platystrophia</i>	<i>ponderosa</i>	OSU	23270	
979	Orthida	Platystrophiidae	<i>Platystrophia</i>	<i>ponderosa</i>	Richard Hicklin, MS, 1933		Station A
980	Orthida	Platystrophiidae	<i>Platystrophia</i>	<i>ponderosa</i>	Richard Hicklin, MS, 1933		Station E
981	Orthida	Platystrophiidae	<i>Platystrophia</i>	<i>ponderosa</i>	Richard Hicklin, MS, 1933		Station T
982	Orthida	Platystrophiidae	<i>Platystrophia</i>	<i>ponderosa</i>	Richard Hicklin, MS, 1933		Station 6-L
983	Orthida	Platystrophiidae	<i>Platystrophia</i>	<i>ponderosa</i>	CiMNH	23884	
984	Orthida	Platystrophiidae	<i>Platystrophia</i>	<i>ponderosa</i>	MUGM	23264	
985	Orthida	Platystrophiidae	<i>Platystrophia</i>	<i>ponderosa</i>	MUGM	23252	
986	Orthida	Platystrophiidae	<i>Platystrophia</i>	<i>ponderosa</i>	MUGM	23257	
987	Orthida	Platystrophiidae	<i>Platystrophia</i>	<i>ponderosa</i>	MUGM	25338	
988	Orthida	Platystrophiidae	<i>Platystrophia</i>	<i>ponderosa</i>	Holland and Patzkowsky 2007		72991
989	Orthida	Platystrophiidae	<i>Platystrophia</i>	<i>ponderosa</i>	Holland and Patzkowsky 2007		73130
990	Orthida	Platystrophiidae	<i>Platystrophia</i>	<i>ponderosa</i>	Holland and Patzkowsky 2007		72822
991	Orthida	Platystrophiidae	<i>Platystrophia</i>	<i>ponderosa</i>	Holland and Patzkowsky 2007		73106
992	Orthida	Platystrophiidae	<i>Platystrophia</i>	<i>ponderosa</i>	Holland and Patzkowsky 2007		72819
993	Orthida	Platystrophiidae	<i>Platystrophia</i>	<i>ponderosa</i>	Holland and Patzkowsky 2007		72681
994	Orthida	Platystrophiidae	<i>Platystrophia</i>	<i>ponderosa</i>	Holland and Patzkowsky 2007		73128
995	Orthida	Platystrophiidae	<i>Platystrophia</i>	<i>ponderosa</i>	Holland and Patzkowsky 2007		73033
996	Orthida	Platystrophiidae	<i>Platystrophia</i>	<i>ponderosa</i>	Holland and Patzkowsky 2007		72670
997	Orthida	Platystrophiidae	<i>Platystrophia</i>	<i>ponderosa</i>	MUGM	24113	1.51L14
998	Orthida	Platystrophiidae	<i>Platystrophia</i>	<i>ponderosa</i>	OSU	23962	
999	Orthida	Platystrophiidae	<i>Platystrophia</i>	<i>ponderosa</i>	MUGM	24049	3.36A4
1000	Orthida	Platystrophiidae	<i>Platystrophia</i>	<i>ponderosa</i>	MUGM	23918	1.1K
1001	Orthida	Platystrophiidae	<i>Platystrophia</i>	<i>ponderosa</i>	CiMNH	20885	
1002	Orthida	Platystrophiidae	<i>Platystrophia</i>	<i>ponderosa</i>	CiMNH	12025	
1003	Orthida	Platystrophiidae	<i>Platystrophia</i>	<i>ponderosa</i>	MUGM	23953	1.48A9
1004	Orthida	Platystrophiidae	<i>Platystrophia</i>	<i>ponderosa</i>	MUGM	24118	2.16Q7A
1005	Orthida	Platystrophiidae	<i>Platystrophia</i>	<i>ponderosa</i>	MUGM	29721	
1006	Orthida	Platystrophiidae	<i>Platystrophia</i>	<i>ponderosa</i>	MUGM	29445	
1007	Orthida	Platystrophiidae	<i>Platystrophia</i>	<i>ponderosa</i>	MUGM	23981	3.13D
1008	Orthida	Platystrophiidae	<i>Platystrophia</i>	<i>ponderosa</i>	MUGM	24015	3.26C
1009	Orthida	Platystrophiidae	<i>Platystrophia</i>	<i>ponderosa</i>	OSU	23950	
1010	Orthida	Platystrophiidae	<i>Platystrophia</i>	<i>ponderosa</i>	MUGM	29446	
1011	Orthida	Platystrophiidae	<i>Platystrophia</i>	<i>ponderosa</i>	MUGM	24051	3.39G2
1012	Orthida	Platystrophiidae	<i>Platystrophia</i>	<i>ponderosa</i>	OSU	23918	
1013	Orthida	Platystrophiidae	<i>Platystrophia</i>	<i>ponderosa</i>	MUGM	24050	3.39A
1014	Orthida	Platystrophiidae	<i>Platystrophia</i>	<i>ponderosa</i>	MUGM	23971	3.10G9
1015	Orthida	Platystrophiidae	<i>Platystrophia</i>	<i>ponderosa</i>	MUGM	23998	3.20D3
1016	Orthida	Platystrophiidae	<i>Platystrophia</i>	<i>ponderosa</i>	Holland and Patzkowsky 2007		73049
1017	Orthida	Platystrophiidae	<i>Platystrophia</i>	<i>ponderosa</i>	MUGM	23924	1.25C15
1018	Orthida	Platystrophiidae	<i>Platystrophia</i>	<i>ponderosa</i>	MUGM	23250	
1019	Orthida	Platystrophiidae	<i>Platystrophia</i>	<i>ponderosa</i>	Holland and Patzkowsky 2007		72856
1020	Orthida	Platystrophiidae	<i>Platystrophia</i>	<i>sublaticosta</i>	CiMNH	20785	
1021	Orthida	Platystrophiidae	<i>Platystrophia</i>	<i>sublaticosta</i>	CiMNH	1633	
1022	Orthida	Platystrophiidae	<i>Platystrophia</i>	<i>sublaticosta</i>	CiMNH	20784	
1023	Orthida	Platystrophiidae	<i>Platystrophia</i>	<i>sublaticosta</i>	Holland and Patzkowsky 2007		72657
1024	Orthida	Platystrophiidae	<i>Platystrophia</i>	<i>sublaticosta</i>	CiMNH	20857	
1025	Orthida	Platystrophiidae	<i>Platystrophia</i>	<i>cypha</i>	MUGM	8077	

Appendix 1. Species distribution data

969	Maysvillian	C3	McMillan	Mt. Auburn	OH	Butler	Winchester	C3	38.941510	-83.651440
970	Maysvillian	C3	McMillan	Mt. Auburn	OH	Butler	Maud	C3	39.345500	-84.386500
971	Maysvillian	C3	McMillan	Mt. Auburn	OH	Butler	Maud	C3	39.355800	-84.390010
972	Maysvillian	C3	McMillan	Corryville	OH	Clermont	Williamsburg	C3	39.041667	-84.041667
973	Maysvillian	C3	Brookville	Station Hollow Shale	OH	Brown	Russelville	C3	38.8834	-83.7667
974	Maysvillian	C3	McMillan	Corryville	OH	Clermont	Batavia	C3	39.169444	-84.123611
975	Maysvillian	C3	McMillan	Mt. Auburn	OH	Clermont	Batavia	C3	39.188889	-84.108333
976	Maysvillian	C3	Mt. Auburn		KY	Trimble	Bedford	C3	38.6022	-85.2736
977	Maysvillian	C3	McMillan	Corryville	KY	Boone	Walton	C3	38.875580	-84.610120
978	Maysvillian	C3	McMillan	Mt. Auburn	OH	Butler	Westchester	C3	39.331720	-84.407200
979	Maysvillian	C3	McMillan	Mt. Auburn	KY	Clark	Agawam	C3	37.8951	-84.0875
980	Maysvillian	C3	McMillan	Corryville	KY	Bath	Owingsville	C3	38.1478	-83.825
981	Maysvillian	C3	McMillan	Corryville	KY	Fleming	Concord	C3	38.3035	-83.7813
982	Maysvillian	C3	McMillan	Mt. Auburn	KY	Fleming	Flemingsburg	C3	38.3694	-83.7375
983	Maysvillian	C3	McMillan	Mt. Auburn	OH	Brown	Russellville	C3	38.866390	-83.786800
984	Maysvillian	C3	McMillan	Mt. Auburn	OH	Brown	Russelville	C3	38.874444	-83.787222
985	Maysvillian	C3	McMillan	Mt. Auburn	OH	Hamilton	Cincinnati	C3	39.161938	-84.456680
986	Maysvillian	C3	McMillan	Mt. Auburn	OH	Butler	Westchester	C3	39.330250	-84.407341
987	Maysvillian	C3	McMillan	Corryville	OH	Butler	Middletown	C3	39.514751	-84.398140
988	Maysvillian	C3	Corryville		OH	Hamilton		C3	39.29655	-84.4043
989	Maysvillian	C3	Mount Auburn		OH	Butler		C3	39.42507	-84.60073
990	Maysvillian	C3	Mount Auburn		OH	Warren		C3	39.32828	-84.6783
991	Maysvillian	C3	Mount Auburn		KY	Mason		C3	38.50455	-83.75855
992	Maysvillian	C3	Mount Auburn		OH	Brown		C3	38.87033	-83.91333
993	Maysvillian	C3	Gilbert		KY	Nelson		C3	37.76737	-85.35557
994	Maysvillian	C3	Mount Auburn		OH	Butler		C3	39.40603	-84.50192
995	Maysvillian	C3	Corryville		KY	Mason		C3	38.68263	-83.79007
996	Maysvillian	C3	Stingy Creek		KY	Lincoln		C3	37.57361	-84.61361
997	Richmondian	C4	Arnheim		OH	Adams		C4	38.793217	-83.545083
998	Richmondian	C4	Arnheim		OH	Adams	Decatur	C4	38.806667	-83.663889
999	Richmondian	C4	Arnheim	Oregonia	KY	Jefferson	Fish	C4	38.194444	-85.488333
1000	Richmondian	C4	Arnheim		OH	Butler		C4	39.499667	-84.718900
1001	Richmondian	C4	Arnheim		IN	Dearborn	Weisburg	C4	39.217960	-85.045940
1002	Richmondian	C4	Arnheim		OH	Hamilton	Bridgetown	C4	39.153190	-84.637300
1003	Richmondian	C4	Arnheim		OH	Brown	Russelville	C4	38.874444	-83.787222
1004	Richmondian	C4	Arnheim		IN	Jefferson	Madison	C4	38.744884	-85.423721
1005	Richmondian	C4	Arnheim		OH	Hamilton	Cincinnati	C4	39.218611	-84.585833
1006	Richmondian	C4	Arnheim		OH	Butler	Middletown	C4	39.514751	-84.398140
1007	Richmondian	C4	Arnheim		KY	Bath	Owingsville	C4	38.144576	-83.764188
1008	Richmondian	C4	Arnheim		KY	Nelson	Bardstown	C4	37.769444	-85.357500
1009	Richmondian	C4	Arnheim		OH	Clermont	Williamsburg	C4	39.056950	-83.985020
1010	Richmondian	C4	Arnheim		Ky	Clark	Winchester	C4	37.989059	-84.179718
1011	Richmondian	C4	Arnheim		KY	Henry	Newcastle	C4	38.388052	-85.180318
1012	Richmondian	C4	Arnheim		OH	Butler	Oxford	C4	39.510100	-84.723640
1013	Richmondian	C4	Arnheim		KY	Henry	Newcastle	C4	38.388052	-85.180318
1014	Richmondian	C4	Arnheim	Sunset	KY	Fleming	Flemingsburg	C4	38.363333	-83.760556
1015	Richmondian	C4	Arnheim		KY	Lincoln	Standford	C4	37.518056	-84.677222
1016	Richmondian	C4	Bull Fork		KY	Fleming		C4	38.40108	-83.72325
1017	Richmondian	C4	Arnheim		OH	Butler	Hamilton	C4	39.397110	-85.234610
1018	Richmondian	C4	Arnheim		OH	Clermont	Goshen	C4	39.232941	-84.161674
1019	Richmondian	C4	Sunset		KY	Fleming		C4	38.48523	-83.75887
1020	Maysvillian	C2	Fairview	Fairmount	OH	Hamilton	Barrsville	C2	39.123700	-84.551890
1021	Maysvillian	C2	Fairview	Fairmount	KY	Boone	Eljahs Creek	C2	39.102230	-84.686870
1022	Maysvillian	C2	Fairview	Fairmount	OH	Hamilton	Cincinnati	C2	39.093611	-84.566944
1023	Maysvillian	C2	Fairview		OH	Campbell		C2	39.0059	-84.4501
1024	Maysvillian	C3	McMillan	Mt. Auburn	OH	Hamilton	College Hill	C3	39.202160	-84.547050
1025	Richmondian	C5	Waynesville		IN	Franklin	Brookville	C5	39.435278	-84.999722

Appendix 1. Species distribution data

969	RR Cut above Winchester
970	S of Maud, 1st RR cut S of town
971	S of Maud, 1st RR cut S of town
972	S of Williamsburg
973	Section is in a spillway of a small reservoir. On route 62 halfway between Russelville and Ash Ridge
974	Stonelick Ck., Batavia
975	Stonelick Ck., Batavia
976	U. S. Route 42, 2.5 miles east of U.S. Route 421 in Bedford
977	Walton, L&R RR cut
978	Westchester
979	
980	
981	
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985	
986	
987	
988	Hillside exposure at Trammel Fossil Park at north end of Tramway Road in Sharonville
989	Hillside exposure behind Wal-Mart at Ohio State Route 177 and Washington Boulevard, 0.3 miles southeast of intersection of Ohio State Routes 130 and 177
990	Multiple streamside exposures on Lick Run upstream and downstream of bridge for Ohio State Route 132
991	Roadcut on both sides of Kentucky State Route 11, 0.4 miles north of intersection with Kentucky State Route 324 at Weedonia
992	Roadcut on north side of Ohio State Route 125, west of Georgetown and on east side of valley for White Oak Creek
993	Roadcut on west side of US Route 150, 0.6 miles west of Nelson / Washington county line
994	Roadcuts on both sides of Bypass State Route 4, 0.3 miles south of intersection with Ohio State Route 4 and at overpass of Milliken Road
995	Roadcuts on both sides of new US Route 62 and 68, east of Maysville and beginning 0.3 miles south of bridge over Ohio River
996	Roadcuts on both sides of US Route 27, 0.8 miles south of Garrard - Lincoln county line
997	1st Ck crossing West Union Pike
998	2nd Ck E of Decatur (Adas Run)
999	3/4mi W of Fish
1000	4mi Ck
1001	Big 4 RR cuts 14-15, Weisburg
1002	Bridgetown
1003	Ck N of Russelville (W fork)
1004	Clifty Ck, Madison
1005	Colerain Ave near mt. Airy
1006	Creek 1.25mi N of W Middletown
1007	Exp 1/4 mi upst from pumping staton
1008	Exp along ck 7mi E of Brdstown
1009	Exp along Williamsburg and Mt. Orab Pike, halfway to Mt. Orab
1010	Exp at Merrits Ferry
1011	Exp in ck. 3.2mi S of Newcastle
1012	Four Mile Creek, S of Oxford
1013	Just S of NewCastle Section in Creek
1014	Quarry 4mi below Fiemingsburg
1015	SW of Standford
1016	Three roadcuts on both sides Kentucky State Route 32, beginning 0.6 miles southeast of the intersection of with Kentucky State Route 11 on the south side of Flemingsburg and continuing for 0.6 miles to the southeast.
1017	Trib of W. Fork-Westwood
1018	
1019	Roadcut on east side of Kentucky State Route 11 at Fleming-Mason County Line.
1020	Barrsville
1021	Eljahs Creek
1022	Mt. Echo Park Road, Cincinnati
1023	Roadcut on northeast side of AA highway (Kentucky State Route 9), 1.4 miles west of US Route 27 overpass
1024	College Hill, greater Cincy
1025	Rt101 N of Brookville

Appendix 1. Species distribution data

1026	Orthida	Platystrophiidae	<i>Platystrophia</i>	<i>ponderosa</i>	MUGM	208	1.46C2
1027	Orthida	Plectorthidae	<i>Plectorthis</i>	<i>aequivalvis</i>	CiMNH	3	
1028	Orthida	Plectorthidae	<i>Plectorthis</i>	<i>aequivalvis</i>	CiMNH	16857	
1029	Orthida	Plectorthidae	<i>Plectorthis</i>	<i>aequivalvis</i>	CiMNH	27892	
1030	Orthida	Plectorthidae	<i>Plectorthis</i>	<i>fissicosta</i>	OSU	11529	
1031	Orthida	Plectorthidae	<i>Plectorthis</i>	<i>fissicosta</i>	OSU	14020	
1032	Orthida	Plectorthidae	<i>Plectorthis</i>	<i>fissicosta</i>	CiMNH	16863	
1033	Orthida	Plectorthidae	<i>Plectorthis</i>	<i>fissicosta</i>	CiMNH	H324	
1034	Orthida	Plectorthidae	<i>Plectorthis</i>	<i>fissicosta</i>	Holland and Patzkowsky 2007		73076
1035	Orthida	Plectorthidae	<i>Plectorthis</i>	<i>jamesi</i>	OSU	22971	
1036	Orthida	Plectorthidae	<i>Plectorthis</i>	<i>neglecta</i>	OSU	24093	
1037	Orthida	Plectorthidae	<i>Plectorthis</i>	<i>neglecta</i>	CiMNH	16867	
1038	Orthida	Plectorthidae	<i>Plectorthis</i>	<i>plicatella</i>	CiMNH	27996	
1039	Orthida	Plectorthidae	<i>Plectorthis</i>	<i>plicatella</i>	CiMNH	23873	
1040	Orthida	Plectorthidae	<i>Plectorthis</i>	<i>plicatella</i>	CiMNH		
1041	Orthida	Plectorthidae	<i>Plectorthis</i>	<i>plicatella</i>	CiMNH	33450	
1042	Orthida	Plectorthidae	<i>Plectorthis</i>	<i>plicatella</i>	CiMNH	23963	
1043	Orthida	Plectorthidae	<i>Plectorthis</i>	<i>plicatella</i>	Holland and Patzkowsky 2007		73070
1044	Orthida	Plectorthidae	<i>Plectorthis</i>	<i>fissicosta</i>	CiMNH	26270	
1045	Strophomenida	Rafinesquinidae	<i>Rafinesquina</i>	<i>alternata</i>		64424	
1046	Strophomenida	Rafinesquinidae	<i>Rafinesquina</i>	<i>alternata</i>	CiMNH	28185	
1047	Strophomenida	Rafinesquinidae	<i>Rafinesquina</i>	<i>alternata</i>	Holland and Patzkowsky 2007		72762
1048	Strophomenida	Rafinesquinidae	<i>Rafinesquina</i>	<i>alternata</i>	Holland and Patzkowsky 2007		72646
1049	Strophomenida	Rafinesquinidae	<i>Rafinesquina</i>	<i>alternata</i>	Holland and Patzkowsky 2007		72954
1050	Strophomenida	Rafinesquinidae	<i>Rafinesquina</i>	<i>alternata</i>	Holland and Patzkowsky 2007		73022
1051	Strophomenida	Rafinesquinidae	<i>Rafinesquina</i>	<i>alternata</i>	Holland and Patzkowsky 2007		72674
1052	Strophomenida	Rafinesquinidae	<i>Rafinesquina</i>	<i>alternata</i>	Holland and Patzkowsky 2007		72695
1053	Strophomenida	Rafinesquinidae	<i>Rafinesquina</i>	<i>alternata</i>	CiMNH	28102	
1054	Strophomenida	Rafinesquinidae	<i>Rafinesquina</i>	<i>alternata</i>	CiMNH	31232	
1055	Strophomenida	Rafinesquinidae	<i>Rafinesquina</i>	<i>alternata</i>	CiMNH	27907	
1056	Strophomenida	Rafinesquinidae	<i>Rafinesquina</i>	<i>alternata</i>	Field		
1057	Strophomenida	Rafinesquinidae	<i>Rafinesquina</i>	<i>alternata</i>	Field		IN-JE-0003
1058	Strophomenida	Rafinesquinidae	<i>Rafinesquina</i>	<i>alternata</i>	CiMNH	18712	
1059	Strophomenida	Rafinesquinidae	<i>Rafinesquina</i>	<i>alternata</i>	CiMNH	23879	
1060	Strophomenida	Rafinesquinidae	<i>Rafinesquina</i>	<i>alternata</i>	Field		
1061	Strophomenida	Rafinesquinidae	<i>Rafinesquina</i>	<i>alternata</i>	CiMNH	28722	
1062	Strophomenida	Rafinesquinidae	<i>Rafinesquina</i>	<i>alternata</i>	CiMNH	19108	
1063	Strophomenida	Rafinesquinidae	<i>Rafinesquina</i>	<i>alternata</i>	CiMNH	25984	
1064	Strophomenida	Rafinesquinidae	<i>Rafinesquina</i>	<i>alternata</i>	CiMNH	27966	
1065	Strophomenida	Rafinesquinidae	<i>Rafinesquina</i>	<i>alternata</i>	Holland and Patzkowsky 2007		72984
1066	Strophomenida	Rafinesquinidae	<i>Rafinesquina</i>	<i>alternata</i>	Holland and Patzkowsky 2007		72889
1067	Strophomenida	Rafinesquinidae	<i>Rafinesquina</i>	<i>alternata</i>	Holland and Patzkowsky 2007		72747
1068	Strophomenida	Rafinesquinidae	<i>Rafinesquina</i>	<i>alternata</i>	Holland and Patzkowsky 2007		72721
1069	Strophomenida	Rafinesquinidae	<i>Rafinesquina</i>	<i>alternata</i>	Holland and Patzkowsky 2007		72660
1070	Strophomenida	Rafinesquinidae	<i>Rafinesquina</i>	<i>alternata</i>	Holland and Patzkowsky 2007		72792
1071	Strophomenida	Rafinesquinidae	<i>Rafinesquina</i>	<i>alternata</i>	Holland and Patzkowsky 2007		72706
1072	Strophomenida	Rafinesquinidae	<i>Rafinesquina</i>	<i>alternata</i>	Holland and Patzkowsky 2007		73024
1073	Strophomenida	Rafinesquinidae	<i>Rafinesquina</i>	<i>alternata</i>	Holland and Patzkowsky 2007		72705
1074	Strophomenida	Rafinesquinidae	<i>Rafinesquina</i>	<i>alternata</i>	Holland and Patzkowsky 2007		72698
1075	Strophomenida	Rafinesquinidae	<i>Rafinesquina</i>	<i>alternata</i>	Hay, H. B., Ph. D, 1981		
1076	Strophomenida	Rafinesquinidae	<i>Rafinesquina</i>	<i>alternata</i>	Krumpolz, M.S., 1980		Unit 60
1077	Strophomenida	Rafinesquinidae	<i>Rafinesquina</i>	<i>alternata</i>	Field		
1078	Strophomenida	Rafinesquinidae	<i>Rafinesquina</i>	<i>alternata</i>	CiMNH	18721	
1079	Strophomenida	Rafinesquinidae	<i>Rafinesquina</i>	<i>alternata</i>	Hay, H. B., Ph. D, 1981		
1080	Strophomenida	Rafinesquinidae	<i>Rafinesquina</i>	<i>alternata</i>	CiMNH	22572	
1081	Strophomenida	Rafinesquinidae	<i>Rafinesquina</i>	<i>alternata</i>	CiMNH	18725	
1082	Strophomenida	Rafinesquinidae	<i>Rafinesquina</i>	<i>alternata</i>	CiMNH	31231	

Appendix 1. Species distribution data

1026	Maysvillian	C2	McMillan	Bellevue	OH	Clermont	Williamsburg	C2	39.054420	-84.053610
1027	Maysvillian	C2	Fairview	Fairmount	KY	Mason	Maysville	C2	38.631944	-83.751667
1028	Maysvillian	C2	Fairview	Fairmount	KY	Kenton	Ludlow	C2	39.092490	-84.547460
1029	Maysvillian	C3	McMillan	Corryville	OH	Hamilton	Cincinnati	C3	39.184444	-84.401944
1030	Maysvillian	C2	Fairview	Fairmount	KY	Kenton	Covington	C2	39.083620	-84.508620
1031	Maysvillian	C2	Fairview		OH	Hamilton	Miamitown	C2	39.205850	-84.709490
1032	Maysvillian	C2	Fairview	Fairmount	KY	Kenton	Covington	C2	39.070990	-84.510200
1033	Maysvillian	C2	Fairview		KY	Mason	Maysville	C2	38.631944	-83.751667
1034	Maysvillian	C2	Fairview		KY	Mason		C2	38.68263	-83.79007
1035	Maysvillian	C2	Fairview	Mt. Hope	OH	Brown		C2	38.865833	-83.924167
1036	Maysvillian	C2	Fairview	Mt. Hope	OH	Hamilton	Cheviot	C2	39.155330	-84.614410
1037	Maysvillian	C2	Fairview	Mt. Hope	OH	Hamilton	Sharonville	C2	39.268050	-84.413290
1038	Maysvillian	C2	Fairview		OH	Hamilton	Cincinnati	C2	39.121667	-84.547500
1039	Maysvillian	C2	Fairview	Fairmount	KY	Kenton	Covington	C2	39.070990	-84.510200
1040	Maysvillian	C2	Fairview	Fairmount	KY	Kenton	Covington	C2	39.033573	-84.516607
1041	Maysvillian	C2	McMillan		KY	Kenton	Covington	C2	39.083620	-84.508620
1042	Maysvillian	C2	Fairview	Fairmount	IN	Dearborn	Guilford	C2	39.167990	-84.911890
1043	Maysvillian	C2	Fairview		KY	Mason		C2	38.68263	-83.79007
1044	Maysvillian	C2	Fairview		OH	Clermont	Bethel	C2	38.984620	-84.051510
1045	Edenian	C1	Kope		OH	Washington		C1	38.803000	-84.158000
1046	Edenian	C1	McMicken		OH	Hamilton	Bald Knob	C1	39.121726	-84.547444
1047	Edenian	C1	Kope		KY	Kenton		C1	39.00833	-84.52972
1048	Edenian	C1	Kope		OH	Campbell		C1	39.0059	-84.4501
1049	Edenian	C1	Kope		KY	Bracken		C1	38.78625	-84.21023
1050	Edenian	C1	Kope		KY	Mason		C1	38.68263	-83.79007
1051	Edenian	C1	Kope	Fulton	OH	Campbell		C1	39.0333	-84.4167
1052	Maysvillian	C1	Clays Ferry		KY	Marion		C1	37.58577	-85.07163
1053	Maysvillian	C2	Fairview	Mt. Hope	OH	Hamilton	Cincinnati	C2	39.121667	-84.547500
1054	Maysvillian	C2	McMillan	Bellevue	OH	Hamilton	Cincinnati	C2	39.147500	-84.597222
1055	Maysvillian	C2	McMillan	Bellevue	KY	Boone	Walton	C2	38.875580	-84.610120
1056	Maysvillian	C2	McMillan	Bellevue	KY	Lincoln		C2	37.744033	-85.262083
1057	Maysvillian	C2	McMillan	Bellevue	IN	Jefferson	Madison	C2	38.749233	-85.376783
1058	Maysvillian	C2	McMillan	Bellevue	KY	Boone	Walton	C2	38.875580	-84.610120
1059	Maysvillian	C2	Fairview	Fairmount	KY	Kenton	Covington	C2	39.070990	-84.510200
1060	Maysvillian	C2	McMillan		KY	Bullitt	Taylorsville	C2	38.038617	-85.291583
1061	Maysvillian	C2	McMillan	Bellevue	OH	Hamilton	Cincinnati	C2	39.191667	-84.529444
1062	Maysvillian	C2	McMillan	Bellevue	OH	Hamilton	Cincinnati	C2	39.123333	-84.498056
1063	Maysvillian	C2	McMillan	Bellevue	OH	Hamilton	Cincinnati	C2	39.116171	-84.501332
1064	Maysvillian	C2	McMillan	Bellevue	KY	Boone	Walton	C2	38.875580	-84.610120
1065	Maysvillian	C2	Bellevue		OH	Hamilton		C2	39.29655	-84.4043
1066	Maysvillian	C2	Bellevue		OH	Clermont		C2	39.17193	-84.12193
1067	Maysvillian	C2	Grant Lake		KY	Washington		C2	37.66092	-85.17058
1068	Maysvillian	C2	Calloway Creek		KY	Lincoln		C2	37.43403	-84.84982
1069	Maysvillian	C2	Fairview		OH	Campbell		C2	39.0059	-84.4501
1070	Maysvillian	C2	Miamitown		KY	Kenton		C2	39.02778	-84.51055
1071	Maysvillian	C2	Calloway Creek		KY	Lincoln		C2	37.44852	-84.83527
1072	Maysvillian	C2	Bellevue		KY	Mason		C2	38.68263	-83.79007
1073	Maysvillian	C2	Calloway Creek		KY	Lincoln		C2	37.46393	-84.82255
1074	Maysvillian	C2	Calloway Creek		KY	Marion		C2	37.58577	-85.07163
1075	Maysvillian	C3	Brookville	Excello	OH	Brown	Ripley	C3	38.78	-83.8
1076	Maysvillian	C3	McMillan	Corryville	OH	Hamilton	Barnesburg	C3	39.2292	-84.62505
1077	Maysvillian	C3	McMillan	Mt. Auburn	KY	Trimble	Bedford	C3	38.601383	-85.274216
1078	Maysvillian	C3	McMillan	Mt. Auburn	OH	Hamilton	Cincinnati	C3	39.202160	-84.547050
1079	Maysvillian	C3	Brookville	Excello	IN	Decator	New Point	C3	39.29	-85.33
1080	Maysvillian	C3	McMillan	Corryville	OH	Hamilton	Cincinnati	C3	39.139722	-84.576667
1081	Maysvillian	C3	McMillan	Corryville	OH	Hamilton	Cincinnati	C3	39.184444	-84.401944
1082	Maysvillian	C3	McMillan	Corryville	OH	Hamilton	Cincinnati	C3	39.215556	-84.518056

Appendix 1. Species distribution data

1026	A trib of East Fork
1027	
1028	
1029	Fairview Heights
1030	Covington area
1031	Jct Morgan Rd and I-275 SW of Miamitown
1032	Schlosser Quarry
1033	
1034	Roadcuts on both sides of new US Route 62 and 68, east of Maysville and beginning 0.3 miles south of bridge over Ohio River
1035	Exp along rd at Bald Point
1036	Lf. Fk. Rapid Run Cheviot
1037	
1038	Bald Knob cut
1039	Schloss quarry
1040	
1041	
1042	
1043	Roadcuts on both sides of new US Route 62 and 68, east of Maysville and beginning 0.3 miles south of bridge over Ohio River
1044	S. of Ohio 133 in Clover Lick Creek, 2.1 NE.
1045	Abandoned quarry along the Ohio River, at the intersection of Bear Creek Road and Route I-52, 4.8 km east of Neville and 1.8 km west of Chilo, Washington County, Ohio. Sample made toward top of quarry exposure. Moscow, Ohio-K
1046	Bald Knob, Cincinnati
1047	Hillside exposure behind White Castle food processing plant on Kentucky State Route 17, 1.0 miles south of I-275 overpass
1048	Roadcut on northeast side of AA highway (Kentucky State Route 9), 1.4 miles west of US Route 27 overpass
1049	Roadcut on south side of AA highway (Kentucky State Route 9), immediately southeast of intersection with Holts Creek Road
1050	Roadcuts on both sides of new US Route 62 and 68, east of Maysville and beginning 0.3 miles south of bridge over Ohio River
1051	Stream exposures along Duck Creek, immediately southwest of Kentucky State Route 1998 (Industrial Road), 0.3 miles south of intersection with Kentucky State Route 8
1052	Two roadcuts on both sides of US Route 68, 0.4 and 0.9 miles west of intersection with Kentucky State Route 243
1053	Bald Knob cut
1054	Harrison Ave
1055	L & N RR cut
1056	Lincoln Homestead
1057	Madison-421S
1058	RR cut
1059	Schloss quarry
1060	Taylorsville Lake-2
1061	top of small quarry opposite Groesbeck Rd.
1062	Wilkinson & Symmes St, Cincinnati
1063	WKRC Tower, Highland Ave.
1064	
1065	Hillside exposure at Trammel Fossil Park at north end of Tramway Road in Sharonville
1066	Multiple streamside exposures along Stonelick Creek, downstream from Ohio State Route 131 bridge. Private property; permission required for entry.
1067	Roadcut on both sides of US Route 150, beginning 0.1 mile west of Perryville Loop Road and 0.7 miles west of intersection with Kentucky State Route 2758 (Simmstown Road), and continuing for 0.9 miles east
1068	Roadcut on east side of US Route 127, 3.1 miles south of intersection with Kentucky State Route 78 at Hustonville, and 0.5 mile north of Lincoln-Casey county line
1069	Roadcut on northeast side of AA highway (Kentucky State Route 9), 1.4 miles west of US Route 27 overpass
1070	Roadcut on northeast side of Mason Road, 0.2 miles southeast of intersection with Taylor Mill Road
1071	Roadcut on west side of US Route 127, 1.7 miles north of Lincoln-Casey county line, and 1.9 miles south of intersection with Kentucky State Route 78 at Hustonville
1072	Roadcuts on both sides of new US Route 62 and 68, east of Maysville and beginning 0.3 miles south of bridge over Ohio River
1073	Roadcuts on both sides of US Route 127, 1.5 miles north of Lincoln-Casey county line, and 2.1 miles south of intersection with Kentucky State Route 78 at Hustonville
1074	Two roadcuts on both sides of US Route 68, 0.4 and 0.9 miles west of intersection with Kentucky State Route 243
1075	About 3 miles (highway distance) NE of Ripley, Ohio on Routes 62 and 68
1076	Base of section at the southeast end of outcrop, 1.4 m higher than the level of the first lightpost on the east side of Blue Rock Road just northwest of the exit ramp from Cross Country Highway.
1077	Bedford
1078	College Hill
1079	Core in stone quarry at New Point
1080	Faber Ave.
1081	Fairview Heights
1082	Galbraith Rd.

Appendix 1. Species distribution data

1083	Strophomenida	Rafinesquinidae	<i>Rafinesquina</i>	<i>alternata</i>	CiMNH	25991	
1084	Strophomenida	Rafinesquinidae	<i>Rafinesquina</i>	<i>alternata</i>	CiMNH	28710	
1085	Strophomenida	Rafinesquinidae	<i>Rafinesquina</i>	<i>alternata</i>	CiMNH	27790	
1086	Strophomenida	Rafinesquinidae	<i>Rafinesquina</i>	<i>alternata</i>	Hay, H. B., Ph. D, 1981		
1087	Strophomenida	Rafinesquinidae	<i>Rafinesquina</i>	<i>alternata</i>	CiMNH	27907	
1088	Strophomenida	Rafinesquinidae	<i>Rafinesquina</i>	<i>alternata</i>	Oldroyd, PhD, 1978		0-2m
1089	Strophomenida	Rafinesquinidae	<i>Rafinesquina</i>	<i>alternata</i>	CiMNH	19041	
1090	Strophomenida	Rafinesquinidae	<i>Rafinesquina</i>	<i>alternata</i>	Hay, H. B., Ph. D, 1981		
1091	Strophomenida	Rafinesquinidae	<i>Rafinesquina</i>	<i>alternata</i>	Hay, H. B., Ph. D, 1981		
1092	Strophomenida	Rafinesquinidae	<i>Rafinesquina</i>	<i>alternata</i>	Krumpolz, M.S., 1980		Unit 14
1093	Strophomenida	Rafinesquinidae	<i>Rafinesquina</i>	<i>alternata</i>	Krumpolz, M.S., 1980		Unit 54
1094	Strophomenida	Rafinesquinidae	<i>Rafinesquina</i>	<i>alternata</i>	Hay, H. B., Ph. D, 1981		
1095	Strophomenida	Rafinesquinidae	<i>Rafinesquina</i>	<i>alternata</i>	Roy H. Reinhart, 1977		Stop 5
1096	Strophomenida	Rafinesquinidae	<i>Rafinesquina</i>	<i>alternata</i>	CiMNH	31223	
1097	Strophomenida	Rafinesquinidae	<i>Rafinesquina</i>	<i>alternata</i>	CiMNH	27774	
1098	Strophomenida	Rafinesquinidae	<i>Rafinesquina</i>	<i>alternata</i>	Holland Ph. D, 1990		
1099	Strophomenida	Rafinesquinidae	<i>Rafinesquina</i>	<i>alternata</i>	Holland Ph. D, 1990		
1100	Strophomenida	Rafinesquinidae	<i>Rafinesquina</i>	<i>alternata</i>	Holland Ph. D, 1990		
1101	Strophomenida	Rafinesquinidae	<i>Rafinesquina</i>	<i>alternata</i>	Holland Ph. D, 1990		
1102	Strophomenida	Rafinesquinidae	<i>Rafinesquina</i>	<i>alternata</i>	Hay, H. B., Ph. D, 1981		
1103	Strophomenida	Rafinesquinidae	<i>Rafinesquina</i>	<i>alternata</i>	Hay, H. B., Ph. D, 1981		
1104	Strophomenida	Rafinesquinidae	<i>Rafinesquina</i>	<i>alternata</i>	Holland Ph. D, 1990		
1105	Strophomenida	Rafinesquinidae	<i>Rafinesquina</i>	<i>alternata</i>	CiMNH	31054	
1106	Strophomenida	Rafinesquinidae	<i>Rafinesquina</i>	<i>alternata</i>	Richard Hicklin, MS, 1933		Station F
1107	Strophomenida	Rafinesquinidae	<i>Rafinesquina</i>	<i>alternata</i>	Richard Hicklin, MS, 1933		Station V
1108	Strophomenida	Rafinesquinidae	<i>Rafinesquina</i>	<i>alternata</i>	Richard Hicklin, MS, 1933		Station 6-F
1109	Strophomenida	Rafinesquinidae	<i>Rafinesquina</i>	<i>alternata</i>	Goldman, M.S., 1993		0-19.24 m
1110	Strophomenida	Rafinesquinidae	<i>Rafinesquina</i>	<i>alternata</i>	CiMNH	5759	
1111	Strophomenida	Rafinesquinidae	<i>Rafinesquina</i>	<i>alternata</i>	Holland and Patzkowsky 2007		72997
1112	Strophomenida	Rafinesquinidae	<i>Rafinesquina</i>	<i>alternata</i>	Holland and Patzkowsky 2007		72591
1113	Strophomenida	Rafinesquinidae	<i>Rafinesquina</i>	<i>alternata</i>	Holland and Patzkowsky 2007		72887
1114	Strophomenida	Rafinesquinidae	<i>Rafinesquina</i>	<i>alternata</i>	Holland and Patzkowsky 2007		73041
1115	Strophomenida	Rafinesquinidae	<i>Rafinesquina</i>	<i>alternata</i>	Holland and Patzkowsky 2007		73103
1116	Strophomenida	Rafinesquinidae	<i>Rafinesquina</i>	<i>alternata</i>	Holland and Patzkowsky 2007		72814
1117	Strophomenida	Rafinesquinidae	<i>Rafinesquina</i>	<i>alternata</i>	Holland and Patzkowsky 2007		73127
1118	Strophomenida	Rafinesquinidae	<i>Rafinesquina</i>	<i>alternata</i>	Holland and Patzkowsky 2007		73030
1119	Strophomenida	Rafinesquinidae	<i>Rafinesquina</i>	<i>alternata</i>	CiMNH	35040	
1120	Strophomenida	Rafinesquinidae	<i>Rafinesquina</i>	<i>alternata</i>	CiMNH	28635	
1121	Strophomenida	Rafinesquinidae	<i>Rafinesquina</i>	<i>alternata</i>	CiMNH	34980	
1122	Strophomenida	Rafinesquinidae	<i>Rafinesquina</i>	<i>alternata</i>	Field		OH-WA-0002
1123	Strophomenida	Rafinesquinidae	<i>Rafinesquina</i>	<i>alternata</i>	MUGM	132	
1124	Strophomenida	Rafinesquinidae	<i>Rafinesquina</i>	<i>alternata</i>	CiMNH	20672	
1125	Strophomenida	Rafinesquinidae	<i>Rafinesquina</i>	<i>alternata</i>	Holland and Patzkowsky 2007		72910
1126	Strophomenida	Rafinesquinidae	<i>Rafinesquina</i>	<i>alternata</i>	Holland and Patzkowsky 2007		72919
1127	Strophomenida	Rafinesquinidae	<i>Rafinesquina</i>	<i>alternata</i>	Holland and Patzkowsky 2007		72959
1128	Strophomenida	Rafinesquinidae	<i>Rafinesquina</i>	<i>alternata</i>	Holland and Patzkowsky 2007		72920
1129	Strophomenida	Rafinesquinidae	<i>Rafinesquina</i>	<i>alternata</i>	Holland and Patzkowsky 2007		72607
1130	Strophomenida	Rafinesquinidae	<i>Rafinesquina</i>	<i>alternata</i>	Holland and Patzkowsky 2007		72964
1131	Strophomenida	Rafinesquinidae	<i>Rafinesquina</i>	<i>alternata</i>	Holland and Patzkowsky 2007		72540
1132	Strophomenida	Rafinesquinidae	<i>Rafinesquina</i>	<i>alternata</i>	Holland and Patzkowsky 2007		72812
1133	Strophomenida	Rafinesquinidae	<i>Rafinesquina</i>	<i>alternata</i>	Holland and Patzkowsky 2007		72844
1134	Strophomenida	Rafinesquinidae	<i>Rafinesquina</i>	<i>alternata</i>	Holland and Patzkowsky 2007		72428
1135	Strophomenida	Rafinesquinidae	<i>Rafinesquina</i>	<i>alternata</i>	Holland and Patzkowsky 2007		73108
1136	Strophomenida	Rafinesquinidae	<i>Rafinesquina</i>	<i>alternata</i>	Holland and Patzkowsky 2007		72924
1137	Strophomenida	Rafinesquinidae	<i>Rafinesquina</i>	<i>alternata</i>	Holland and Patzkowsky 2007		72862
1138	Strophomenida	Rafinesquinidae	<i>Rafinesquina</i>	<i>alternata</i>	Holland and Patzkowsky 2007		72852
1139	Strophomenida	Rafinesquinidae	<i>Rafinesquina</i>	<i>alternata</i>	Holland and Patzkowsky 2007		72469

Appendix 1. Species distribution data

1083	Maysvillian	C3	McMillan	Corryville	OH	Hamilton	Cincinnati	C3	39.211667	-84.462500
1084	Maysvillian	C3	McMillan	Corryville	OH	Hamilton	Cincinnati	C3	39.193611	-84.536667
1085	Maysvillian	C3	McMillan	Corryville	OH	Hamilton	Cincinnati	C3	39.203056	-84.548056
1086	Maysvillian	C3	Brookville	Station Hollow Shale	OH	Butler	Trenton	C3	39.48	-84.41
1087	Maysvillian	C3	McMillan	Corryville	KY	Boone	Walton	C3	38.875580	-84.610120
1088	Maysvillian	C3	Dillsboro	Corryville	IN	Jefferson	Madison	C3	38.7511	-85.1417
1089	Maysvillian	C3	McMillan	Corryville	OH	Hamilton	Cincinnati	C3	39.128056	-84.526389
1090	Maysvillian	C3	Brookville	Station Hollow Shale	OH	Montgomery	Miamisburg	C3	39.62	-84.26
1091	Maysvillian	C3	Brookville	Excello	IN	Dearborn	Dillsboro	C3	39.02	-85.04
1092	Maysvillian	C3	McMillan	Mt. Auburn	OH	Hamilton	Dry Ridge	C3	39.2833	-84.6
1093	Maysvillian	C3	McMillan	Corryville	OH	Hamilton	Forest Park	C3	39.2251	-84.5251
1094	Maysvillian	C3	Brookville	Excello	IN	Jefferson	Madison	C3	38.7511	-85.1417
1095	Maysvillian	C3	McMillan	Corryville/Mt. Auburn	OH	Butler	Middletown	C3	39.5	-84.4167
1096	Maysvillian	C3	McMillan	Mt. Auburn	OH	Butler	Maud	C3	39.355180	-84.390480
1097	Maysvillian	C3	McMillan	Corryville	OH	Hamilton	Cincinnati	C3	39.128056	-84.526667
1098	Maysvillian	C3	Corryville		IN	Jefferson	Madison	C3	38.7494	-85.3764
1099	Maysvillian	C3	Mt. Auburn		KY	Lincoln	Gilbert	C3	37.5736	-84.6136
1100	Maysvillian	C3	Mt. Auburn		OH	Hamilton	Barnesburg	C3	39.2292	-84.62505
1101	Maysvillian	C3	Corryville		OH	Brown	Georgetown	C3	38.8722	-83.9167
1102	Maysvillian	C3	Brookville	Station Hollow Shale	OH	Brown	Russelville	C3	38.8834	-83.7667
1103	Maysvillian	C3	Brookville	Excello	KY	Trimble	Bedford	C3	38.6	-85.28
1104	Maysvillian	C3	Mt. Auburn		KY	Trimble	Bedford	C3	38.6022	-85.2736
1105	Maysvillian	C3	McMillan	Mt. Auburn	OH	Hamilton	Cincinnati	C3	39.150278	-84.588056
1106	Maysvillian	C3	McMillan	Mt. Auburn	KY	Clark	Agawam	C3	37.8951	-84.0875
1107	Maysvillian	C3	McMillan	Corryville	KY	Fleming	Concord	C3	38.3035	-83.7813
1108	Maysvillian	C3	McMillan	Mt. Auburn	KY	Fleming	Flemingsburg	C3	38.3694	-83.7375
1109	Maysvillian	C3	Corryville		OH	Clermont	Newtownsville	C3	39.1778	-84.1119
1110	Maysvillian	C3	McMillan	Corryville	OH	Hamilton	Sharon Cr.	C3	39.258110	-84.425130
1111	Maysvillian	C3	Corryville		OH	Hamilton		C3	39.29655	-84.4043
1112	Maysvillian	C3	Corryville		OH	Butler		C3	39.42507	-84.60073
1113	Maysvillian	C3	Corryville		OH	Clermont		C3	39.17193	-84.12193
1114	Maysvillian	C3	Corryville		OH	Warren		C3	39.32828	-84.6783
1115	Maysvillian	C3	Mount Auburn		KY	Mason		C3	38.50455	-83.75855
1116	Maysvillian	C3	Mount Auburn		OH	Brown		C3	38.87033	-83.91333
1117	Maysvillian	C3	Mount Auburn		OH	Butler		C3	39.40603	-84.50192
1118	Maysvillian	C3	Corryville		KY	Mason		C3	38.68263	-83.79007
1119	Richmondian	C4	Arnheim		OH	Butler	West Chester	C4	39.331720	-84.407200
1120	Richmondian	C4	Arnheim		OH	Butler	Maud	C4	39.345500	-84.386500
1121	Richmondian	C4	Oregonia		OH	Hamilton	Cincinnati	C4	39.162778	-84.601944
1122	Richmondian	C4	Arnheim		OH	Warren		C4	39.484650	-84.063466
1123	Richmondian	C4	Oregonia		OH	Hamilton	Cincinnati	C4	39.162778	-84.601944
1124	Richmondian	C4	Arnheim		OH	Brown	Russellville	C4	38.866390	-83.786800
1125	Richmondian	C4	Sunset		OH	Butler		C4	39.34342	-84.39478
1126	Richmondian	C4	Sunset		OH	Butler		C4	39.37238	-84.38675
1127	Richmondian	C4	Sunset		OH	Hamilton		C4	39.13053	-84.61802
1128	Richmondian	C4	Sunset		OH	Butler		C4	39.37113	-84.38022
1129	Richmondian	C4	Sunset		OH	Butler		C4	39.42507	-84.60073
1130	Richmondian	C4	Oregonia		OH	Hamilton		C4	39.12922	-84.59657
1131	Richmondian	C4	Oregonia		OH	Warren		C4	39.48455	-84.635
1132	Richmondian	C4	Oregonia		OH	Warren		C4	39.48127	-84.6817
1133	Richmondian	C4	Sunset		OH	Warren		C4	39.32828	-84.6783
1134	Richmondian	C4	Oregonia		IN	Franklin		C4	39.43694	-84.97806
1135	Richmondian	C4	Sunset		KY	Mason		C4	38.607	-83.76752
1136	Richmondian	C4	Oregonia		OH	Butler		C4	39.5414	-84.34475
1137	Richmondian	C4	Sunset		KY	Mason		C4	38.50455	-83.75855
1138	Richmondian	C4	Sunset		KY	Fleming		C4	38.48523	-83.75887
1139	Richmondian	C4	Oregonia		IN	Franklin		C4	39.3425	-84.95358

Appendix 1. Species distribution data

- 1083 Galbraith, E. of Winton Rd.
- 1084 Groesbeck Rd.
- 1085 Hamilton Ave cut along Mill Rd.
- 1086 In Elk Creek less than 1 mile from the confluence with the Miami River near Trenton, OH
- 1087 L & N RR cut
- 1088 Large Roadcut across U. S. Highway 421 from cemetery, 0.9 miles north of Madison, Indiana, courthouse. NW 14 NE 1/4 sect. 35, T4N, R10E, Madison West quadrangle, Indiana-Kentucky
- 1089 McMillan St.
- 1090 Mound Laboratory near Miamisburg, OH
- 1091 On Station Hollow Road just north of Route 50 at Dillsboro
- 1092 On U.S. 27, 1.5 miles north of Interstate 275.
- 1093 On Waycross Road, 0.4 miles north of intersection with Winton Road. Stream exposure south of culvert.
- 1094 Outcrops along Route 421 northeast of Madison, Indiana.
- 1095 Railroad cut on armco steel property in Oneida (permission required)
- 1096 Railroad Cut, Fee's farm
- 1097 Ravine St. near McMillan
- 1098 Roadcut on east site of U. S. Route 421, 0.9 miles north of Indiana State Route 56 in Madison.
- 1099 Roadcuts of U. S. Route 27, 0.8 miles south of Garrard/Lincoln County Line.
- 1100 Roadcuts on Blue Rock Road, 0.1 miles north of intersection with Cross Country Highway, 0.3 miles southeast of Interstate 275.
- 1101 Roadcuts on Ohio State Route 125 on both sides of the Whiteoak Creek valley, 0.8 miles west of U. S. Route 68 in Georgetown
- 1102 Section is in a spillway of a small reservoir. On route 62 halfway between Russelville and Ash Ridge
- 1103 Series of roadcuts about 2.5 miles east of Bedford, Kentucky on Route 42. Another is 1 mile north of that. On a side road going northwest from Route 42
- 1104 U. S. Route 42, 2.5 miles east of U.S. Route 421 in Bedford
- 1105 Westwood-Northern Blvd. just E of Montana Ave.
- 1106
- 1107
- 1108
- 1109
- 1110
- 1111 Hillside exposure at Trammel Fossil Park at north end of Tramway Road in Sharonville
- 1112 Hillside exposure behind Wal-Mart at Ohio State Route 177 and Washington Boulevard, 0.3 miles southeast of intersection of Ohio State Routes 130 and 177
- 1113 Multiple streamside exposures along Stonelick Creek, downstream from Ohio State Route 131 bridge. Private property; permission required for entry.
- 1114 Multiple streamside exposures on Lick Run upstream and downstream of bridge for Ohio State Route 132
- 1115 Roadcut on both sides of Kentucky State Route 11, 0.4 miles north of intersection with Kentucky State Route 324 at Weedonia
- 1116 Roadcut on north side of Ohio State Route 125, west of Georgetown and on east side of valley for White Oak Creek
- 1117 Roadcuts on both sides of Bypass State Route 4, 0.3 miles south of intersection with Ohio State Route 4 and at overpass of Milliken Road
- 1118 Roadcuts on both sides of new US Route 62 and 68, east of Maysville and beginning 0.3 miles south of bridge over Ohio River
- 1119 1mi north of West Chester
- 1120 Big 4 RR cut 1 mile below Maud
- 1121 Boudinot Ave. and Westwood-Northern Blvd.
- 1122 Caesar Creek Dam
- 1123 Jct. Boudinot Ave & Westwood-Northern Blvd
- 1124
- 1125 Construction excavation on west side of southbound offramp from I-75 to Cincinnati-Dayton Road
- 1126 Hillside exposure and construction excavation behind Liberty Towne Centre on Cincinnati-Dayton Road, immediately south of intersection with Ohio State Route 129
- 1127 Hillside exposure behind Gold's Gym in Glenway Crossing Shopping Center on Glen Crossing Way, just west of intersection with Glenway Avenue
- 1128 Hillside exposure behind Stor-N-Lock at Liberty Pointe Shopping Area, on Cincinnati-Dayton Road, immediately south of intersection with Ohio State Route 129
- 1129 Hillside exposure behind Wal-Mart at Ohio State Route 177 and Washington Boulevard, 0.3 miles southeast of intersection of Ohio State Routes 130 and 177
- 1130 Hillside exposure behind Wal-Mart in Western Hills square on Ferguson Road
- 1131 Hillside exposure on north side of dam outlet from Caesar Creek Lake
- 1132 Multiple streamside exposures along unnamed stream that flows west of end of emergency spillway for Caesar Creek Lake and northward into Caesar Creek
- 1133 Multiple streamside exposures on Lick Run upstream and downstream of bridge for Ohio State Route 132
- 1134 Roadcut at intersection of Indiana State Route 101 and Brookville Dam Road
- 1135 Roadcut on both sides of AA highway (Kentucky State Route 9), 0.4 miles west of intersection with Kentucky State Route 11
- 1136 Roadcut on both sides of Breiel Boulevard, 0.1 miles south of termination at Ohio State Route 73 in Middletown
- 1137 Roadcut on both sides of Kentucky State Route 11, 0.4 miles north of intersection with Kentucky State Route 324 at Weedonia
- 1138 Roadcut on east side of Kentucky State Route 11 at Fleming-Mason County Line.
- 1139 Roadcut on Indiana State Route 1, 1.6 miles to 2.1 miles south of intersection with US Route 52 at Cedar Grove

Appendix 1. Species distribution data

1140	Strophomenida	Rafinesquinidae	<i>Rafinesquina</i>	<i>alternata</i>	Holland and Patzkowsky 2007	73115
1141	Strophomenida	Rafinesquinidae	<i>Rafinesquina</i>	<i>alternata</i>	Holland and Patzkowsky 2007	72935
1142	Strophomenida	Rafinesquinidae	<i>Rafinesquina</i>	<i>alternata</i>	Holland and Patzkowsky 2007	72724
1143	Strophomenida	Rafinesquinidae	<i>Rafinesquina</i>	<i>alternata</i>	Holland and Patzkowsky 2007	73120
1144	Strophomenida	Rafinesquinidae	<i>Rafinesquina</i>	<i>alternata</i>	Holland and Patzkowsky 2007	72851
1145	Strophomenida	Rafinesquinidae	<i>Rafinesquina</i>	<i>alternata</i>	CiMNH	27691
1146	Strophomenida	Rafinesquinidae	<i>Rafinesquina</i>	<i>alternata</i>	Field	IN-FR-0001
1147	Strophomenida	Rafinesquinidae	<i>Rafinesquina</i>	<i>alternata</i>	Field	IN-FR-0002
1148	Strophomenida	Rafinesquinidae	<i>Rafinesquina</i>	<i>alternata</i>	CiMNH	27581
1149	Strophomenida	Rafinesquinidae	<i>Rafinesquina</i>	<i>alternata</i>	CiMNH	35008
1150	Strophomenida	Rafinesquinidae	<i>Rafinesquina</i>	<i>alternata</i>	Field	OH-WA-0003
1151	Strophomenida	Rafinesquinidae	<i>Rafinesquina</i>	<i>alternata</i>	Field	IN-FR-0003
1152	Strophomenida	Rafinesquinidae	<i>Rafinesquina</i>	<i>alternata</i>	CiMNH	35017
1153	Strophomenida	Rafinesquinidae	<i>Rafinesquina</i>	<i>alternata</i>	Field	IN-JE-0004
1154	Strophomenida	Rafinesquinidae	<i>Rafinesquina</i>	<i>alternata</i>	CiMNH	
1155	Strophomenida	Rafinesquinidae	<i>Rafinesquina</i>	<i>alternata</i>	Field	
1156	Strophomenida	Rafinesquinidae	<i>Rafinesquina</i>	<i>alternata</i>	Field	IN-FR-0005
1157	Strophomenida	Rafinesquinidae	<i>Rafinesquina</i>	<i>alternata</i>	CiMNH	P37
1158	Strophomenida	Rafinesquinidae	<i>Rafinesquina</i>	<i>alternata</i>	CiMNH	31230
1159	Strophomenida	Rafinesquinidae	<i>Rafinesquina</i>	<i>alternata</i>	CiMNH	38640
1160	Strophomenida	Rafinesquinidae	<i>Rafinesquina</i>	<i>alternata</i>	CiMNH	21523
1161	Strophomenida	Rafinesquinidae	<i>Rafinesquina</i>	<i>alternata</i>	CiMNH	40714
1162	Strophomenida	Rafinesquinidae	<i>Rafinesquina</i>	<i>alternata</i>	CiMNH	18539
1163	Strophomenida	Rafinesquinidae	<i>Rafinesquina</i>	<i>alternata</i>	CiMNH	19033
1164	Strophomenida	Rafinesquinidae	<i>Rafinesquina</i>	<i>alternata</i>	CiMNH	
1165	Strophomenida	Rafinesquinidae	<i>Rafinesquina</i>	<i>alternata</i>	Holland and Patzkowsky 2007	72867
1166	Strophomenida	Rafinesquinidae	<i>Rafinesquina</i>	<i>alternata</i>	Holland and Patzkowsky 2007	72579
1167	Strophomenida	Rafinesquinidae	<i>Rafinesquina</i>	<i>alternata</i>	Holland and Patzkowsky 2007	72926
1168	Strophomenida	Rafinesquinidae	<i>Rafinesquina</i>	<i>alternata</i>	Holland and Patzkowsky 2007	72937
1169	Strophomenida	Rafinesquinidae	<i>Rafinesquina</i>	<i>alternata</i>	Holland and Patzkowsky 2007	72882
1170	Strophomenida	Rafinesquinidae	<i>Rafinesquina</i>	<i>alternata</i>	Holland and Patzkowsky 2007	72881
1171	Strophomenida	Rafinesquinidae	<i>Rafinesquina</i>	<i>alternata</i>	Holland and Patzkowsky 2007	72804
1172	Strophomenida	Rafinesquinidae	<i>Rafinesquina</i>	<i>alternata</i>	Holland and Patzkowsky 2007	72805
1173	Strophomenida	Rafinesquinidae	<i>Rafinesquina</i>	<i>alternata</i>	Holland and Patzkowsky 2007	72870
1174	Strophomenida	Rafinesquinidae	<i>Rafinesquina</i>	<i>alternata</i>	Holland and Patzkowsky 2007	72872
1175	Strophomenida	Rafinesquinidae	<i>Rafinesquina</i>	<i>alternata</i>	Holland and Patzkowsky 2007	72873
1176	Strophomenida	Rafinesquinidae	<i>Rafinesquina</i>	<i>alternata</i>	Holland and Patzkowsky 2007	72874
1177	Strophomenida	Rafinesquinidae	<i>Rafinesquina</i>	<i>alternata</i>	Holland and Patzkowsky 2007	72875
1178	Strophomenida	Rafinesquinidae	<i>Rafinesquina</i>	<i>alternata</i>	Holland and Patzkowsky 2007	72876
1179	Strophomenida	Rafinesquinidae	<i>Rafinesquina</i>	<i>alternata</i>	Holland and Patzkowsky 2007	72877
1180	Strophomenida	Rafinesquinidae	<i>Rafinesquina</i>	<i>alternata</i>	Holland and Patzkowsky 2007	73035
1181	Strophomenida	Rafinesquinidae	<i>Rafinesquina</i>	<i>alternata</i>	Holland and Patzkowsky 2007	72627
1182	Strophomenida	Rafinesquinidae	<i>Rafinesquina</i>	<i>alternata</i>	Holland and Patzkowsky 2007	72430
1183	Strophomenida	Rafinesquinidae	<i>Rafinesquina</i>	<i>alternata</i>	Holland and Patzkowsky 2007	72444
1184	Strophomenida	Rafinesquinidae	<i>Rafinesquina</i>	<i>alternata</i>	Holland and Patzkowsky 2007	73100
1185	Strophomenida	Rafinesquinidae	<i>Rafinesquina</i>	<i>alternata</i>	Holland and Patzkowsky 2007	73099
1186	Strophomenida	Rafinesquinidae	<i>Rafinesquina</i>	<i>alternata</i>	Holland and Patzkowsky 2007	72518
1187	Strophomenida	Rafinesquinidae	<i>Rafinesquina</i>	<i>alternata</i>	Holland and Patzkowsky 2007	72949
1188	Strophomenida	Rafinesquinidae	<i>Rafinesquina</i>	<i>alternata</i>	Holland and Patzkowsky 2007	72691
1189	Strophomenida	Rafinesquinidae	<i>Rafinesquina</i>	<i>alternata</i>	Holland and Patzkowsky 2007	72624
1190	Strophomenida	Rafinesquinidae	<i>Rafinesquina</i>	<i>alternata</i>	Holland and Patzkowsky 2007	73114
1191	Strophomenida	Rafinesquinidae	<i>Rafinesquina</i>	<i>alternata</i>	Holland and Patzkowsky 2007	72953
1192	Strophomenida	Rafinesquinidae	<i>Rafinesquina</i>	<i>alternata</i>	Holland and Patzkowsky 2007	72878
1193	Strophomenida	Rafinesquinidae	<i>Rafinesquina</i>	<i>alternata</i>	Holland and Patzkowsky 2007	73065
1194	Strophomenida	Rafinesquinidae	<i>Rafinesquina</i>	<i>alternata</i>	CiMNH	
1195	Strophomenida	Rafinesquinidae	<i>Rafinesquina</i>	<i>alternata</i>	CiMNH	5484
1196	Strophomenida	Rafinesquinidae	<i>Rafinesquina</i>	<i>alternata</i>	Holland and Patzkowsky 2007	72632

Appendix 1. Species distribution data

1140	Richmondian	C4	Oregonia		KY	Mason		C4	38.58483	-83.70102
1141	Richmondian	C4	Sunset		OH	Butler		C4	39.40603	-84.50192
1142	Maysvillian	C4	Reba		KY	Lincoln		C4	37.57778	-84.61
1143	Richmondian	C4	Oregonia		OH	Brown		C4	39.02827	-83.84772
1144	Richmondian	C4	Oregonia		OH	Clermont		C4	39.21567	-84.08497
1145	Richmondian	C5	Waynesville		IN	Dearborn	Weisburg	C5	39.217960	-85.045940
1146	Richmondian	C5	Liberty		IN	Franklin	Brookville	C5	39.437950	-84.987400
1147	Richmondian	C5	Liberty		IN	Franklin		C5	39.484600	-84.064033
1148	Richmondian	C5	Liberty		IN	Dearborn	Weisburg	C5	39.217960	-85.045940
1149	Richmondian	C5	Whitewater		OH	Warren	Oregonia	C5	39.479790	-84.043650
1150	Richmondian	C5	Liberty		OH	Warren		C5	39.477600	-84.063010
1151	Richmondian	C5	Liberty		IN	Franklin	Brookville	C5	39.480383	-84.948633
1152	Richmondian	C5	Liberty		OH	Clinton	Clarksville	C5	39.386440	-83.905050
1153	Richmondian	C5	Liberty		IN	Jefferson	Madison	C5	38.738833	-85.430317
1154	Richmondian	C5	Liberty		OH	Butler	Oxford	C5	39.506870	-84.745100
1155	Richmondian	C5	Liberty		IN	Wayne	Richmond	C5	37.748466	-84.297716
1156	Richmondian	C5	Liberty		IN	Franklin	Brookville	C5	39.341966	-84.953650
1157	Richmondian	C5	Liberty		OH	Hamilton	Cincinnati	C5	39.580920	-84.751020
1158	Richmondian	C5	Waynesville		OH	Warren	Lebanon	C5	39.473500	-84.250980
1159	Richmondian	C5	Waynesville		IN	Ripley	Versailles	C5	39.080720	-85.250430
1160	Richmondian	C5	Waynesville		OH	Brown	Russellville	C5	38.866390	-83.786800
1161	Richmondian	C5	Waynesville		IN	Ripley	Versailles	C5	39.071910	-85.251880
1162	Richmondian	C5	Waynesville		IN	Dearborn	Weisburg	C5	39.217960	-85.045940
1163	Richmondian	C5	Waynesville		OH	Warren	Lebanon	C5	39.435220	-84.202900
1164	Richmondian	C5	Waynesville		OH	Butler	Oxford	C5	39.506870	-84.745100
1165	Richmondian	C5	Whitewater		OH	Clinton		C5	39.3894	-83.927
1166	Richmondian	C5	Whitewater	Lower	OH	Warren		C5	39.48027	-84.5712
1167	Richmondian	C5	Waynesville		OH	Butler		C5	39.35915	-84.36065
1168	Richmondian	C5	Waynesville		IN	Franklin		C5	39.43858	-85.0052
1169	Richmondian	C5	Liberty		OH	Warren		C5	39.47997	-84.04893
1170	Richmondian	C5	Waynesville		OH	Warren		C5	39.47997	-84.04893
1171	Richmondian	C5	Waynesville	Clarksville	OH	Warren		C5	39.48127	-84.6817
1172	Richmondian	C5	Waynesville	Fort Ancient	OH	Warren		C5	39.48127	-84.6817
1173	Richmondian	C5	Waynesville		OH	Warren		C5	39.48127	-84.6817
1174	Richmondian	C5	Waynesville		OH	Warren		C5	39.48127	-84.6817
1175	Richmondian	C5	Waynesville		OH	Warren		C5	39.48127	-84.6817
1176	Richmondian	C5	Waynesville		OH	Warren		C5	39.48127	-84.6817
1177	Richmondian	C5	Waynesville		OH	Warren		C5	39.48127	-84.6817
1178	Richmondian	C5	Waynesville		OH	Warren		C5	39.48127	-84.6817
1179	Richmondian	C5	Waynesville		OH	Warren		C5	39.48127	-84.6817
1180	Richmondian	C5	Waynesville	Fort Ancient	OH	Warren		C5	39.32828	-84.6783
1181	Richmondian	C5	Whitewater	Lower	OH	Greene		C5	39.79568	-84.08913
1182	Richmondian	C5	Waynesville		IN	Franklin		C5	39.43694	-84.97806
1183	Richmondian	C5	Whitewater	Lower	IN	Union		C5	39.48798	-84.94867
1184	Richmondian	C5	Waynesville		IN	Jefferson		C5	38.77122	-85.36338
1185	Richmondian	C5	Liberty		IN	Jefferson		C5	38.77827	-85.36523
1186	Richmondian	C5	Liberty		IN	Franklin		C5	39.3425	-84.95358
1187	Richmondian	C5	Whitewater		OH	Adams		C5	38.92683	-83.5214
1188	Richmondian	C5	Bardstown		KY	Nelson		C5	37.76737	-85.35557
1189	Richmondian	C5	Waynesville		OH	Warren		C5	39.54853	-84.05233
1190	Richmondian	C5	Bull Fork		KY	Mason		C5	38.59637	-83.71927
1191	Richmondian	C5	Whitewater		OH	Adams		C5	38.8276	-83.50535
1192	Richmondian	C5	Waynesville		OH	Warren		C5	39.48693	-84.6558
1193	Richmondian	C5	Bull Fork		KY	Fleming		C5	38.40108	-83.72325
1194	Richmondian	C6	Whitewater	Upper Whitewater	IN	Ripley	Versailles	C6	39.080440	-85.249730
1195	Richmondian	C6	Elkhorn		IN	Franklin	Hamburg	C6	39.380700	-85.250890
1196	Richmondian	C6	Whitewater	Upper	OH	Greene		C6	39.79568	-84.08913

Appendix 1. Species distribution data

- 1140 Roadcut on south side of AA highway (Kentucky State Route 9), 3.6 miles east of intersection with Kentucky State Route 11 and 0.2 miles west of intersection with Kentucky State Route 1449
- 1141 Roadcuts on both sides of Bypass State Route 4, 0.3 miles south of intersection with Ohio State Route 4 and at overpass of Milliken Road
- 1142 Roadcuts on both sides of US Route 27, 0.5 miles south of Garrard-Lincoln county line.
- 1143 Small quarry on south bank of Flat Fork, just east of where Fry Road crosses creek, north of Ohio 32 and west of intersection with US Route 62 at Mount Orab, Ohio. Private property; permission required for entry.
- 1144 Streamside exposures on southeast side of Stonelick Creek, just southwest of spillway for Stonelick Lake
- 1145 Big 4 RR cuts 14-15
- 1146 Bon Well Hill
- 1147 Brookville Lake Causeway
- 1148 cut 17
- 1149 Flat Fork Creek
- 1150 Flat Fork Falls
- 1151 Garr Hill
- 1152 Lake Cowan Spillway, Route 730
- 1153 Madison-56
- 1154 Oxford
- 1155 Richmond
- 1156 South Gate Hill
- 1157 Stream exposures on Little Four Mile Creek, 1000 ft west of intersection w/loop road in Hueston Woods State Park (greater Cincy)
- 1158 Turtle Creek, Morrow Quad
- 1159 Washbank
- 1160
- 1161
- 1162
- 1163
- 1164
- 1165 Cuts along sides of emergency spillway from Cowan Lake, immediately west of Ohio State Route 730
- 1166 Exposures along walls and floor of emergency spillway for Caesar Creek Lake
- 1167 Hillside exposure along pond on north side of development at northeast corner of intersection of Tylersville and Cox Roads in Westchester
- 1168 Hillside exposure flanking emergency spillway adjacent to dam of Brookville Lake
- 1169 Multiple streamside exposures along Flat Fork, upstream from where stream empties into Caesar Creek Lake
- 1170 Multiple streamside exposures along Flat Fork, upstream from where stream empties into Caesar Creek Lake
- 1171 Multiple streamside exposures along unnamed stream that flows west of end of emergency spillway for Caesar Creek Lake and northward into Caesar Creek
- 1172 Multiple streamside exposures along unnamed stream that flows west of end of emergency spillway for Caesar Creek Lake and northward into Caesar Creek
- 1173 Multiple streamside exposures along unnamed stream that flows west of end of emergency spillway for Caesar Creek Lake and northward into Caesar Creek
- 1174 Multiple streamside exposures along unnamed stream that flows west of end of emergency spillway for Caesar Creek Lake and northward into Caesar Creek
- 1175 Multiple streamside exposures along unnamed stream that flows west of end of emergency spillway for Caesar Creek Lake and northward into Caesar Creek
- 1176 Multiple streamside exposures along unnamed stream that flows west of end of emergency spillway for Caesar Creek Lake and northward into Caesar Creek
- 1177 Multiple streamside exposures along unnamed stream that flows west of end of emergency spillway for Caesar Creek Lake and northward into Caesar Creek
- 1178 Multiple streamside exposures along unnamed stream that flows west of end of emergency spillway for Caesar Creek Lake and northward into Caesar Creek
- 1179 Multiple streamside exposures along unnamed stream that flows west of end of emergency spillway for Caesar Creek Lake and northward into Caesar Creek
- 1180 Multiple streamside exposures on Lick Run upstream and downstream of bridge for Ohio State Route 132
- 1181 Railroad cut on south side of railroad, immediately north of the Wright Brothers Memorial in Fairborn
- 1182 Roadcut at intersection of Indiana State Route 101 and Brookville Dam Road
- 1183 Roadcut on both sides of Indiana State Route 101, 5.0 miles north of Brookville
- 1184 Roadcut on east side of US Route 421, 2.6 miles north of intersection with Indiana State Route 56 in Madison
- 1185 Roadcut on east side of US Route 421, 3.1 miles north of intersection with Indiana State Route 56 in Madison
- 1186 Roadcut on Indiana State Route 1, 1.6 miles to 2.1 miles south of intersection with US Route 52 at Cedar Grove
- 1187 Roadcut on south side of Ohio State Route 32, 0.3 miles east of intersection with Burnt Cabin Road
- 1188 Roadcut on west side of US Route 150, 0.6 miles west of Nelson / Washington county line
- 1189 Roadcut on west side of US Route 42, 1.2 miles north of Main Street in Waynesville
- 1190 Roadcuts on both sides of AA highway (Kentucky State Route 9), 2.4 miles east of intersection with Kentucky State Route 11
- 1191 Roadcuts on both sides of Ohio State Route 41, 2.8 miles north of intersection with Ohio State Route 125
- 1192 Streamside exposures along creek that empties immediately below dam outlet for Caesar Creek Lake and that empties into Caesar's Creek from north side
- 1193 Three roadcuts on both sides Kentucky State Route 32, beginning 0.6 miles southeast of the intersection of with Kentucky State Route 11 on the south side of Flemingsburg and continuing for 0.6 miles to the southeast.
- 1194 Cedar Creek, Versailles
- 1195
- 1196 Railroad cut on south side of railroad, immediately north of the Wright Brothers Memorial in Fairborn

Appendix 1. Species distribution data

1197	Strophomenida	Rafinesquinidae	<i>Rafinesquina</i>	<i>alternata</i>	Holland and Patzkowsky 2007	72455	
1198	Strophomenida	Rafinesquinidae	<i>Rafinesquina</i>	<i>alternata</i>	Hay, H. B., Ph. D, 1981		
1199	Strophomenida	Rafinesquinidae	<i>Rafinesquina</i>	<i>alternata</i>	Krumpolz, M.S., 1980		Unit 47
1200	Strophomenida	Rafinesquinidae	<i>Rafinesquina</i>	<i>alternata</i>	Goldman, M.S., 1993		0-19.24 m
1201	Strophomenida	Rafinesquinidae	<i>Rafinesquina</i>	<i>squamula</i>	CiMNH		
1202	Strophomenida	Rafinesquinidae	<i>Rafinesquina</i>	<i>squamula</i>	CiMNH	26267	
1203	Strophomenida	Rafinesquinidae	<i>Rafinesquina</i>	<i>winchesterensis</i>	Holland and Patzkowsky 2007		72759
1204	Strophomenida	Rafinesquinidae	<i>Rafinesquina</i>	<i>winchesterensis</i>	Holland and Patzkowsky 2007		72726
1205	Orthida	Plaesiomyidae	<i>Retrorsirostra</i>	<i>carleyi</i>	CiMNH	34572	
1206	Orthida	Plaesiomyidae	<i>Retrorsirostra</i>	<i>carleyi</i>	OSU	8005	
1207	Orthida	Plaesiomyidae	<i>Retrorsirostra</i>	<i>carleyi</i>	OSU	15571	
1208	Orthida	Plaesiomyidae	<i>Retrorsirostra</i>	<i>carleyi</i>	OSU	15966	
1209	Orthida	Plaesiomyidae	<i>Retrorsirostra</i>	<i>carleyi</i>	CiMNH	8009	
1210	Orthida	Plaesiomyidae	<i>Retrorsirostra</i>	<i>carleyi</i>	OSU	15697	
1211	Orthida	Plaesiomyidae	<i>Retrorsirostra</i>	<i>carleyi</i>	OSU	23035	
1212	Orthida	Plaesiomyidae	<i>Retrorsirostra</i>	<i>carleyi</i>	CiMNH	18310	
1213	Orthida	Plaesiomyidae	<i>Retrorsirostra</i>	<i>carleyi</i>	CiMNH	18307	
1214	Orthida	Plaesiomyidae	<i>Retrorsirostra</i>	<i>carleyi</i>	Holland and Patzkowsky 2007		72967
1215	Orthida	Plaesiomyidae	<i>Retrorsirostra</i>	<i>carleyi</i>	Holland and Patzkowsky 2007		72924
1216	Orthida	Plaesiomyidae	<i>Retrorsirostra</i>	<i>carleyi</i>	OSU	23024	
1217	Orthida	Plaesiomyidae	<i>Retrorsirostra</i>	<i>carleyi</i>	OSU	23027	
1218	Orthida	Plaesiomyidae	<i>Retrorsirostra</i>	<i>carleyi</i>	OSU	23030	
1219	Orthida	Plaesiomyidae	<i>Retrorsirostra</i>	<i>carleyi</i>	OSU	23026	
1220	Orthida	Plaesiomyidae	<i>Retrorsirostra</i>	<i>carleyi</i>	CiMNH	18489	
1221	Orthida	Plaesiomyidae	<i>Retrorsirostra</i>	<i>carleyi</i>	CiMNH	24122a	
1222	Orthida	Plaesiomyidae	<i>Retrorsirostra</i>	<i>carleyi</i>	OSU	23034	
1223	Orthida	Plaesiomyidae	<i>Retrorsirostra</i>	<i>carleyi</i>	OSU	15656	
1224	Orthida	Plaesiomyidae	<i>Retrorsirostra</i>	<i>carleyi</i>	OSU	14621	
1225	Orthida	Plaesiomyidae	<i>Retrorsirostra</i>	<i>carleyi</i>	OSU	23031	
1226	Orthida	Plaesiomyidae	<i>Retrorsirostra</i>	<i>carleyi</i>	CiMNH	18486	
1227	Orthida	Plaesiomyidae	<i>Retrorsirostra</i>	<i>carleyi</i>	CiMNH	21408	
1228	Orthida	Plaesiomyidae	<i>Retrorsirostra</i>	<i>carleyi</i>	CiMNH	38695	
1229	Rhynchonellida	Rhynchotrematidae	<i>Rhynchotrema</i>	<i>dentatum</i>	MUGM	25982	1.51L11
1230	Rhynchonellida	Rhynchotrematidae	<i>Rhynchotrema</i>	<i>dentatum</i>	MUGM	25955	1.48A3
1231	Rhynchonellida	Rhynchotrematidae	<i>Rhynchotrema</i>	<i>dentatum</i>	MUGM	25979	1.48J10
1232	Rhynchonellida	Rhynchotrematidae	<i>Rhynchotrema</i>	<i>dentatum</i>	MUGM	25954	1.33D5
1233	Rhynchonellida	Rhynchotrematidae	<i>Rhynchotrema</i>	<i>dentatum</i>	MUGM	25981	
1234	Rhynchonellida	Rhynchotrematidae	<i>Rhynchotrema</i>	<i>dentatum</i>	MUGM	25935	1.3D5
1235	Rhynchonellida	Rhynchotrematidae	<i>Rhynchotrema</i>	<i>dentatum</i>	CiMNH	38373	
1236	Rhynchonellida	Rhynchotrematidae	<i>Rhynchotrema</i>	<i>dentatum</i>	MUGM	25971	2.5C9
1237	Rhynchonellida	Rhynchotrematidae	<i>Rhynchotrema</i>	<i>dentatum</i>	Field		IN-FR-0001
1238	Rhynchonellida	Rhynchotrematidae	<i>Rhynchotrema</i>	<i>dentatum</i>	MUGM	25930	1.117A
1239	Rhynchonellida	Rhynchotrematidae	<i>Rhynchotrema</i>	<i>dentatum</i>	CiMNH	18847	
1240	Rhynchonellida	Rhynchotrematidae	<i>Rhynchotrema</i>	<i>dentatum</i>	MUGM	25953	
1241	Rhynchonellida	Rhynchotrematidae	<i>Rhynchotrema</i>	<i>dentatum</i>	CiMNH	28665	
1242	Rhynchonellida	Rhynchotrematidae	<i>Rhynchotrema</i>	<i>dentatum</i>	MUGM	25951	2.1A8
1243	Rhynchonellida	Rhynchotrematidae	<i>Rhynchotrema</i>	<i>dentatum</i>	Field		OH-WA-0003
1244	Rhynchonellida	Rhynchotrematidae	<i>Rhynchotrema</i>	<i>dentatum</i>	Field		IN-FR-0003
1245	Rhynchonellida	Rhynchotrematidae	<i>Rhynchotrema</i>	<i>dentatum</i>	CiMNH	27508	
1246	Rhynchonellida	Rhynchotrematidae	<i>Rhynchotrema</i>	<i>dentatum</i>	CiMNH	19157	
1247	Rhynchonellida	Rhynchotrematidae	<i>Rhynchotrema</i>	<i>dentatum</i>	Field		
1248	Rhynchonellida	Rhynchotrematidae	<i>Rhynchotrema</i>	<i>dentatum</i>	CiMNH	38215	
1249	Rhynchonellida	Rhynchotrematidae	<i>Rhynchotrema</i>	<i>dentatum</i>	CiMNH	38212	
1250	Rhynchonellida	Rhynchotrematidae	<i>Rhynchotrema</i>	<i>dentatum</i>	MUGM	25962	2.6C13
1251	Rhynchonellida	Rhynchotrematidae	<i>Rhynchotrema</i>	<i>dentatum</i>	CiMNH	28308	
1252	Rhynchonellida	Rhynchotrematidae	<i>Rhynchotrema</i>	<i>dentatum</i>	CiMNH	18856	
1253	Rhynchonellida	Rhynchotrematidae	<i>Rhynchotrema</i>	<i>dentatum</i>	MUGM	11390	

Appendix 1. Species distribution data

1197	Richmondian	C6	Whitewater	Upper	IN	Wayne		C6	39.78728	-84.90183
1198	Maysvillian	C3	Brookville	Excello	OH	Brown	Ripley	C3	38.78	-83.8
1199	Maysvillian	C3	McMillan	Mt. Auburn	OH	Hamilton	Dry Ridge	C3	39.2833	-84.6
1200	Maysvillian	C3	Corryville		OH	Clermont	Newtownsville	C3	39.1778	-84.1119
1201	Maysvillian	C2	Fairview	Fairmount	OH	Hamilton	Allandale	C2	39.201170	-84.339630
1202	Maysvillian	C2	Fairview	Fairmount	OH	Montgomery	Fairview	C2	39.786360	-84.220970
1203	Edenian	C1	Kope		KY	Kenton		C1	39.00833	-84.52972
1204	Edenian	C1	Kope		KY	Kenton		C1	39.0297	-84.54167
1205	Richmondian	C4	Arnheim		OH	Warren	Morrow	C4	39.334480	-84.085690
1206	Richmondian	C4	Arnheim		IN	Union	Liberty	C4	39.513430	-84.944240
1207	Richmondian	C4	Arnheim		IN	Franklin	Brookville	C4	39.475556	-84.958056
1208	Richmondian	C4	Arnheim		IN	Franklin	Brookville	C4	39.441290	-84.983160
1209	Richmondian	C4	Arnheim		OH	Hamilton	Bridgetown	C4	39.153190	-84.637300
1210	Richmondian	C4	Arnheim		OH	Warren		C4	39.477600	-84.063010
1211	Richmondian	C4	Arnheim		OH	Butler	Oxford	C4	39.582890	-84.758110
1212	Richmondian	C4	Arnheim		IN	Jefferson	Madison	C4	38.735860	-85.379880
1213	Richmondian	C4	Arnheim		OH	Butler	Oxford	C4	39.506870	-84.745100
1214	Richmondian	C4	Oregonia		OH	Hamilton		C4	39.12922	-84.59657
1215	Richmondian	C4	Oregonia		OH	Butler		C4	39.5414	-84.34475
1216	Richmondian	C5	Liberty		IN	Union	Liberty	C5	39.640980	-84.941550
1217	Richmondian	C5	Waynesville	Blanchester	IN	Union	Liberty	C5	39.583333	-84.908611
1218	Richmondian	C5	Whitewater		IN	Union	Brownsville	C5	39.664320	-85.004670
1219	Richmondian	C5	Waynesville	Blanchester	OH	Butler	Oxford	C5	39.506870	-84.745100
1220	Richmondian	C5	Waynesville		OH	Preble	Camden	C5	39.628910	-84.648690
1221	Richmondian	C5	Waynesville		IN	Dearborn	Weisburg	C5	39.217960	-85.045940
1222	Richmondian	C5	Waynesville	Blanchester	OH	Butler	Hanover	C5	39.428330	-84.646530
1223	Richmondian	C5	Waynesville		IN	Franklin		C5	39.480383	-84.948633
1224	Richmondian	C5	Waynesville		IN	Franklin		C5	39.437950	-84.987400
1225	Richmondian	C5	Waynesville	Blanchester	IN	Franklin	Hamburg	C5	39.380840	-85.250810
1226	Richmondian	C5	Waynesville		IN	Ripley	Versailles	C5	39.071910	-85.251880
1227	Richmondian	C5	Waynesville		IN	Dearborn	Weisburg	C5	39.217960	-85.045940
1228	Richmondian	C5	Whitewater		OH	Warren	Ft. Anceint	C5	39.407740	-84.090190
1229	Richmondian	C4	Arnheim		OH	Adams		C4	38.793200	-83.545067
1230	Richmondian	C4	Arnheim		OH	Brown	Russelville	C4	38.874444	-83.787222
1231	Richmondian	C4	Arnheim		OH	Brown	Arnheim	C4	38.935000	-83.825833
1232	Richmondian	C4	Arnheim		OH	Butler	Westchester	C4	39.330250	-84.407341
1233	Richmondian	C4	Arnheim		OH	Brown	Russelville	C4	38.874444	-83.787222
1234	Richmondian	C5	Whitewater		OH	Preble		C5	39.654130	-84.647670
1235	Richmondian	C5	Waynesville	Marble Hill	KY	Trimble	Bedford	C5	38.592550	-85.317700
1236	Richmondian	C5	Whitewater		IN	Franklin	Laurel	C5	39.500630	-85.186080
1237	Richmondian	C5	Waynesville		IN	Franklin	Brookville	C5	39.437950	-84.987400
1238	Richmondian	C5	Waynesville	Blanchester	OH	Butler		C5	39.503020	-84.759220
1239	Richmondian	C5	Whitewater		OH	Preble	Camden	C5	39.628910	-84.648690
1240	Richmondian	C5	Whitewater		IN	Franklin	Hamburg	C5	39.379670	-85.250880
1241	Richmondian	C5	Whitewater		OH	Preble	Camden	C5	39.627020	-84.664720
1242	Richmondian	C5	Whitewater		IN	Wayne	Richmond	C5	39.756610	-84.904790
1243	Richmondian	C5	Liberty		OH	Warren		C5	39.477600	-84.063010
1244	Richmondian	C5	Liberty		IN	Franklin	Brookville	C5	39.480383	-84.948633
1245	Richmondian	C5	Whitewater		IN	Wayne	Richmond	C5	39.828870	-84.890290
1246	Richmondian	C5	Whitewater		IN	Wayne	Richmond	C5	39.828333	-84.892500
1247	Richmondian	C5	Liberty		IN	Wayne	Richmond	C5	37.748466	-84.297716
1248	Richmondian	C5	Whitewater		IN	Wayne	Richmond	C5	39.759790	-84.918910
1249	Richmondian	C5	Whitewater		IN	Wayne	Short Creek	C5	39.785550	-84.904210
1250	Richmondian	C5	Waynesville		IN	Franklin	Hamburg	C5	39.397110	-85.234610
1251	Richmondian	C5	Waynesville	Blanchester	OH	Clinton	Blanchester	C5	39.238170	-84.022960
1252	Richmondian	C5	Whitewater		IN	Dearborn	Weisburg	C5	39.217960	-85.045940
1253	Richmondian	C5	Whitewater		OH	Butler	Oxford	C5	39.507271	-84.745682

Appendix 1. Species distribution data

1197	Roadcuts on both sides of US Route 27, 0.8 miles north of intersection with Beelor Road
1198	About 3 miles (highway distance) NE of Ripley, Ohio on Routes 62 and 68
1199	On U.S. 27, 1.5 miles north of Interstate 275.
1200	
1201	
1202	
1203	Hillside exposure behind White Castle food processing plant on Kentucky State Route 17, 1.0 miles south of I-275 overpass
1204	Roadcut on north side of Kentucky State Route 371 (Orphanage Road), 0.6 miles west of intersection with Kentucky State Route 17
1205	100 yds east on Second Creek from Ohio #132. About 3 mi. SE of Morrow
1206	Between Liberty and Brookville, Rt 101 S of int w/Fairfield Rd
1207	Brookville Lake, cut at boat ramp off Garr Hill Rd
1208	Brookville Lake, rdcut on Rt 101 at Bonwell Hill nr spillway
1209	C&ORR
1210	Ceaser's Creek spillway excavation, dams site
1211	Four Mile Creek, S of Oxford
1212	Madison
1213	
1214	Hillside exposure behind Wal-Mart in Western Hills square on Ferguson Road
1215	Roadcut on both sides of Breiel Boulevard, 0.1 miles south of termination at Ohio State Route 73 in Middletown
1216	1 mi W of Liberty, Silver Ck trib
1217	2 mi S of Liberty, exp E of road
1218	Brownsville
1219	Bulls Run (Collins Run), .5 mi S of Oxford
1220	Camden
1221	cut 11, Big Four R.R.
1222	Hanover RR cut
1223	Rd cut at end of Garr-Hill, Templeton Ck, NE end of cut, 10 ft from base
1224	Rt 101 at Bonwell Hill
1225	St. Mary's Rock, Hamburg-Oldenburg
1226	Versailles
1227	Weisburg
1228	
1229	1st Ck crossing West Union Pike
1230	Creek north of Russelville
1231	Exp. On Straight Ck. S. Arnheim
1232	RR. Cut above Westchester
1233	
1234	Beasleys Cr.
1235	Bedford
1236	Big Sains Creek south of Laurel
1237	Bon Well Hill
1238	Bulls Run (Collins Run)
1239	Camden
1240	cut along road W. of Hamburg, and in creek
1241	Devil's Backbone Ck, Camden
1242	Elkhorn Ck 4-5 mi S of Richmond
1243	Flat Fork Falls
1244	Garr Hill
1245	Old Quarries, Richmond
1246	Piano Factory, Richmond
1247	Richmond
1248	Road Cuts on US27 south of Richmond. Secs 17 and 30. T13N, R1W.
1249	Route 27
1250	Tributary of Big Salt Creek
1251	Upper Stonelick Ck, near Blanchester
1252	Weisburg
1253	

Appendix 1. Species distribution data

1254	Rhynchonellida	Rhynchotrematidae	<i>Rhynchotrema</i>	<i>dentatum</i>	MUGM	11224	
1255	Rhynchonellida	Rhynchotrematidae	<i>Rhynchotrema</i>	<i>dentatum</i>	Holland and Patzkowsky 2007		72805
1256	Rhynchonellida	Rhynchotrematidae	<i>Rhynchotrema</i>	<i>dentatum</i>	Holland and Patzkowsky 2007		72627
1257	Rhynchonellida	Rhynchotrematidae	<i>Rhynchotrema</i>	<i>dentatum</i>	Holland and Patzkowsky 2007		73050
1258	Rhynchonellida	Rhynchotrematidae	<i>Rhynchotrema</i>	<i>dentatum</i>	MUGM	29288	
1259	Rhynchonellida	Rhynchotrematidae	<i>Rhynchotrema</i>	<i>dentatum</i>	MUGM	25980	1.3H1
1260	Rhynchonellida	Rhynchotrematidae	<i>Rhynchotrema</i>	<i>dentatum</i>	MUGM	25984	1.1D8
1261	Rhynchonellida	Rhynchotrematidae	<i>Rhynchotrema</i>	<i>dentatum</i>	MUGM	25999	
1262	Rhynchonellida	Rhynchotrematidae	<i>Rhynchotrema</i>	<i>dentatum</i>	CiMNH		
1263	Rhynchonellida	Rhynchotrematidae	<i>Rhynchotrema</i>	<i>dentatum</i>	MUGM	25985	1.1H5
1264	Rhynchonellida	Rhynchotrematidae	<i>Rhynchotrema</i>	<i>dentatum</i>	MUGM	25933	1.3A4
1265	Rhynchonellida	Rhynchotrematidae	<i>Rhynchotrema</i>	<i>dentatum</i>	MUGM	25950	1.1G9
1266	Rhynchonellida	Rhynchotrematidae	<i>Rhynchotrema</i>	<i>dentatum</i>	MUGM	25969	1.3C3
1267	Rhynchonellida	Rhynchotrematidae	<i>Rhynchotrema</i>	<i>dentatum</i>	Holland and Patzkowsky 2007		72632
1268	Rhynchonellida	Rhynchotrematidae	<i>Rhynchotrema</i>	<i>dentatum</i>	Holland and Patzkowsky 2007		72454
1269	Rhynchonellida	Rhynchotrematidae	<i>Rhynchotrema</i>	<i>dentatum</i>	Holland and Patzkowsky 2007		72455
1270	Strophomenida	Sowerbyellidae	<i>Sowerbyella</i>	<i>rugosa</i>	Holland and Patzkowsky 2007		72763
1271	Strophomenida	Sowerbyellidae	<i>Sowerbyella</i>	<i>rugosa</i>	Holland and Patzkowsky 2007		72708
1272	Strophomenida	Sowerbyellidae	<i>Sowerbyella</i>	<i>rugosa</i>	Holland and Patzkowsky 2007		72727
1273	Strophomenida	Sowerbyellidae	<i>Sowerbyella</i>	<i>rugosa</i>	Holland and Patzkowsky 2007		72957
1274	Strophomenida	Sowerbyellidae	<i>Sowerbyella</i>	<i>rugosa</i>	Holland and Patzkowsky 2007		72998
1275	Strophomenida	Sowerbyellidae	<i>Sowerbyella</i>	<i>rugosa</i>	Holland and Patzkowsky 2007		72738
1276	Strophomenida	Sowerbyellidae	<i>Sowerbyella</i>	<i>rugosa</i>	Holland and Patzkowsky 2007		72674
1277	Strophomenida	Strophomenidae	<i>Strophomena</i>	<i>concordensis</i>	CiMNH	18858	
1278	Strophomenida	Strophomenidae	<i>Strophomena</i>	<i>concordensis</i>	CiMNH	18794	
1279	Strophomenida	Strophomenidae	<i>Strophomena</i>	<i>concordensis</i>	Field		IN-FR-0001
1280	Strophomenida	Strophomenidae	<i>Strophomena</i>	<i>concordensis</i>	Field		OH-WA-0003
1281	Strophomenida	Strophomenidae	<i>Strophomena</i>	<i>concordensis</i>	Field		IN-FR-0005
1282	Strophomenida	Strophomenidae	<i>Strophomena</i>	<i>maysvillensis</i>	Holland and Patzkowsky 2007		72998
1283	Strophomenida	Strophomenidae	<i>Strophomena</i>	<i>maysvillensis</i>	CiMNH	12311	
1284	Strophomenida	Strophomenidae	<i>Strophomena</i>	<i>nutans</i>	CiMNH	37288	
1285	Strophomenida	Strophomenidae	<i>Strophomena</i>	<i>nutans</i>	CiMNH	18602	
1286	Strophomenida	Strophomenidae	<i>Strophomena</i>	<i>nutans</i>	Field		IN-FR-0001
1287	Strophomenida	Strophomenidae	<i>Strophomena</i>	<i>nutans</i>	Field		IN-FR-0002
1288	Strophomenida	Strophomenidae	<i>Strophomena</i>	<i>nutans</i>	Field		OH-WA-0001
1289	Strophomenida	Strophomenidae	<i>Strophomena</i>	<i>nutans</i>	MUGM	372	
1290	Strophomenida	Strophomenidae	<i>Strophomena</i>	<i>nutans</i>	CiMNH	23634	
1291	Strophomenida	Strophomenidae	<i>Strophomena</i>	<i>nutans</i>	CiMNH	28323	
1292	Strophomenida	Strophomenidae	<i>Strophomena</i>	<i>nutans</i>	CiMNH	1.58A	
1293	Strophomenida	Strophomenidae	<i>Strophomena</i>	<i>nutans</i>	CiMNH	23867	
1294	Strophomenida	Strophomenidae	<i>Strophomena</i>	<i>planoconvexa</i>	Holland and Patzkowsky 2007		73010
1295	Strophomenida	Strophomenidae	<i>Strophomena</i>	<i>planoconvexa</i>	CiMNH	27993	
1296	Strophomenida	Strophomenidae	<i>Strophomena</i>	<i>planoconvexa</i>	CiMNH	18567	
1297	Strophomenida	Strophomenidae	<i>Strophomena</i>	<i>planoconvexa</i>	CiMNH	18604	
1298	Strophomenida	Strophomenidae	<i>Strophomena</i>	<i>planoconvexa</i>	CiMNH	24242	
1299	Strophomenida	Strophomenidae	<i>Strophomena</i>	<i>planoconvexa</i>	Holland and Patzkowsky 2007		72752
1300	Strophomenida	Strophomenidae	<i>Strophomena</i>	<i>planoconvexa</i>	Holland and Patzkowsky 2007		72721
1301	Strophomenida	Strophomenidae	<i>Strophomena</i>	<i>planoconvexa</i>	Holland and Patzkowsky 2007		72667
1302	Strophomenida	Strophomenidae	<i>Strophomena</i>	<i>planoconvexa</i>	Holland and Patzkowsky 2007		73067
1303	Strophomenida	Strophomenidae	<i>Strophomena</i>	<i>planoconvexa</i>	Holland and Patzkowsky 2007		72705
1304	Strophomenida	Strophomenidae	<i>Strophomena</i>	<i>planoconvexa</i>	Holland and Patzkowsky 2007		72698
1305	Strophomenida	Strophomenidae	<i>Strophomena</i>	<i>planumbona</i>	Field		OH-WA-0002
1306	Strophomenida	Strophomenidae	<i>Strophomena</i>	<i>planumbona</i>	CiMNH	18650	
1307	Strophomenida	Strophomenidae	<i>Strophomena</i>	<i>planumbona</i>	CiMNH	27731	
1308	Strophomenida	Strophomenidae	<i>Strophomena</i>	<i>planumbona</i>	Field		IN-FR-0001
1309	Strophomenida	Strophomenidae	<i>Strophomena</i>	<i>planumbona</i>	CiMNH	2.13F	
1310	Strophomenida	Strophomenidae	<i>Strophomena</i>	<i>planumbona</i>	Field		IN-FR-0003

Appendix 1. Species distribution data

1254	Richmondian	C5	Whitewater		IN	Wayne	Richmond	C5	39.829060	-84.891563
1255	Richmondian	C5	Waynesville	Fort Ancient	OH	Warren		C5	39.48127	-84.6817
1256	Richmondian	C5	Whitewater	Lower	OH	Greene		C5	39.79568	-84.08913
1257	Richmondian	C5	Bull Fork		KY	Fleming		C5	38.40108	-83.72325
1258	Richmondian	C6	Whitewater	Upper Whitewater	IN	Wayne	Richmond	C6	39.748466	-84.297716
1259	Richmondian	C6	Elkhorn		OH	Preble	Fair Haven	C6	39.639440	-84.771900
1260	Richmondian	C6	Whitewater	Upper Whitewater	OH	Preble		C6	39.580920	-84.751020
1261	Richmondian	C6	Whitewater	Upper Whitewater	OH	Butler	Oxford	C6	39.506920	-84.745150
1262	Richmondian	C6	Elkhorn		IN	Wayne	Richmond	C6	39.771840	-84.879170
1263	Richmondian	C6	Whitewater	Upper Whitewater	OH	Butler		C6	39.508290	-84.716950
1264	Richmondian	C6	Whitewater	Upper Whitewater	OH	Preble	Hamilton	C6	39.617230	-84.645930
1265	Richmondian	C6	Whitewater	Upper Whitewater	IN	Wayne	Richmond	C6	39.828870	-84.890290
1266	Richmondian	C6	Whitewater	Upper Whitewater	OH	Preble	Camden	C6	39.627018	-84.663783
1267	Richmondian	C6	Whitewater	Upper	OH	Greene		C6	39.79568	-84.08913
1268	Richmondian	C6	Whitewater	Upper	IN	Union		C6	39.48798	-84.94867
1269	Richmondian	C6	Whitewater	Upper	IN	Wayne		C6	39.78728	-84.90183
1270	Edenian	C1	Kope		KY	Kenton		C1	39.00833	-84.52972
1271	Edenian	C1	Kope		OH	Campbell		C1	39.05612	-84.43612
1272	Edenian	C1	Kope		KY	Kenton		C1	39.0297	-84.54167
1273	Edenian	C1	Kope		KY	Bracken		C1	38.78625	-84.21023
1274	Edenian	C1	Kope		KY	Mason		C1	38.68263	-83.79007
1275	Maysvillian	C1	Clays Ferry		KY	Washington		C1	37.64983	-85.07308
1276	Edenian	C1	Kope	Fulton	OH	Campbell		C1	39.0333	-84.4167
1277	Richmondian	C4	Arnheim		KY	Mason	Maysville	C4	38.598611	-83.765556
1278	Richmondian	C4	Arnheim		OH	Brown	Russellville	C4	38.866390	-83.786800
1279	Richmondian	C5	Liberty		IN	Franklin	Brookville	C5	39.437950	-84.987400
1280	Richmondian	C5	Liberty		OH	Warren		C5	39.477600	-84.063010
1281	Richmondian	C5	Waynesville		IN	Franklin	Brookville	C5	39.341966	-84.953650
1282	Edenian	C1	Kope		KY	Mason		C1	38.68263	-83.79007
1283	Maysvillian	C2	Fairview	Mt. Hope	OH	Clermont	Bethel	C2	38.963630	-84.080860
1284	Richmondian	C5	Waynesville	Blanchester	OH	Butler	Oxford	C5	39.497500	-84.759722
1285	Richmondian	C5	Waynesville		OH	Butler	Oxford	C5	39.582890	-84.758110
1286	Richmondian	C5	Liberty		IN	Franklin	Brookville	C5	39.437950	-84.987400
1287	Richmondian	C5	Liberty		IN	Franklin		C5	39.484600	-84.064033
1288	Richmondian	C5	Waynesville		OH	Warren		C5	39.477600	-84.063010
1289	Richmondian	C5	Waynesville		OH	Warren	Waynesville	C5	39.538670	-84.069220
1290	Richmondian	C5	Waynesville		OH	Adams	Manchester	C5	38.685890	-83.580970
1291	Richmondian	C5	Waynesville		OH	Clinton	Blanchester	C5	39.238170	-84.022960
1292	Richmondian	C5	Waynesville		OH	Clinton	Blanchester	C5	39.238170	-83.989030
1293	Richmondian	C5	Waynesville		OH	Warren	Edgewood	C5	39.545890	-84.136790
1294	Edenian	C1	Kope		KY	Mason		C1	38.68263	-83.79007
1295	Maysvillian	C2	Fairview	Mt. Hope	OH	Hamilton	Cincinnati	C2	39.121667	-84.547500
1296	Maysvillian	C2	Fairview	Mt. Hope	OH	Hamilton	Cincinnati	C2	39.134444	-84.520000
1297	Maysvillian	C2	Fairview	Mt. Hope	OH	Hamilton	Cincinnati	C2	39.085833	-84.634167
1298	Maysvillian	C2	Fairview	Fairmount	KY	Kenton	Covington	C2	39.070990	-84.510200
1299	Maysvillian	C2	Calloway Creek		KY	Washington		C2	37.66092	-85.17058
1300	Maysvillian	C2	Calloway Creek		KY	Lincoln		C2	37.43403	-84.84982
1301	Maysvillian	C2	Fairview		OH	Campbell		C2	39.0059	-84.4501
1302	Maysvillian	C2	Fairview		KY	Mason		C2	38.68263	-83.79007
1303	Maysvillian	C2	Calloway Creek		KY	Lincoln		C2	37.46393	-84.82255
1304	Maysvillian	C2	Calloway Creek		KY	Marion		C2	37.58577	-85.07163
1305	Richmondian	C4	Arnheim		OH	Warren		C4	39.484650	-84.063466
1306	Richmondian	C5	Waynesville		OH	Butler	Oxford	C5	39.582890	-84.758110
1307	Richmondian	C5	Waynesville		IN	Dearborn	Weisburg	C5	39.217960	-85.045940
1308	Richmondian	C5	Liberty		IN	Franklin	Brookville	C5	39.437950	-84.987400
1309	Richmondian	C5	Waynesville		IN	Dearborn	Weisburg	C5	39.217960	-85.045940
1310	Richmondian	C5	Liberty		IN	Franklin	Brookville	C5	39.480383	-84.948633

Appendix 1. Species distribution data

1254	
1255	Multiple streamside exposures along unnamed stream that flows west of end of emergency spillway for Caesar Creek Lake and northward into Caesar Creek
1256	Railroad cut on south side of railroad, immediately north of the Wright Brothers Memorial in Fairborn
1257	Three roadcuts on both sides Kentucky State Route 32, beginning 0.6 miles southeast of the intersection of with Kentucky State Route 11 on the south side of Flemingsburg and continuing for 0.6 miles to the southeast.
1258	Big cut on Rt 27 just south of Richmond
1259	Creek south of Fair Haven
1260	Current Hueston Woods Lodge
1261	Dodges Creek
1262	Elkhorn Creek, Richmond
1263	Harkers Run
1264	Paint Crk. Above Devils Backbone
1265	Richmond, old quarries
1266	Tributary of Paint Creek flowing along road
1267	Railroad cut on south side of railroad, immediately north of the Wright Brothers Memorial in Fairborn
1268	Roadcut on both sides of Indiana State Route 101, 5.0 miles north of Brookville
1269	Roadcuts on both sides of US Route 27, 0.8 miles north of intersection with Beelor Road
1270	Hillside exposure behind White Castle food processing plant on Kentucky State Route 17, 1.0 miles south of I-275 overpass
1271	Roadcut on both sides of Kentucky State Route 445, 0.2 miles west of intersection with Kentucky State Route 8
1272	Roadcut on north side of Kentucky State Route 371 (Orphanage Road), 0.6 miles west of intersection with Kentucky State Route 17
1273	Roadcut on south side of AA highway (Kentucky State Route 9), immediately southeast of intersection with Holts Creek Road
1274	Roadcuts on both sides of new US Route 62 and 68, east of Maysville and beginning 0.3 miles south of bridge over Ohio River
1275	Series of roadcuts primarily on north side of US Route 150, beginning at 0.6 miles west of intersection with old US Route 150 and continuing east for 0.4 miles
1276	Stream exposures along Duck Creek, immediately southwest of Kentucky State Route 1998 (Industrial Road), 0.3 miles south of intersection with Kentucky State Route 8
1277	3mi south
1278	
1279	Bon Well Hill
1280	Flat Fork Falls
1281	South Gate Hill
1282	Roadcuts on both sides of new US Route 62 and 68, east of Maysville and beginning 0.3 miles south of bridge over Ohio River
1283	
1284	1mi southwest
1285	4 Mile Cr.
1286	Bon Well Hill
1287	Brookville Lake Causeway
1288	Caesar Creek Spillway
1289	Rd cut on Rt. 42 about 2 mi, NE of Waynesville
1290	Tributary of Island
1291	U. Stonelick and Hunter's Creek
1292	
1293	
1294	Roadcuts on both sides of new US Route 62 and 68, east of Maysville and beginning 0.3 miles south of bridge over Ohio River
1295	Bald Knob cut
1296	Clifton Ave.
1297	Hillside Ave Flats
1298	Schlosser quarry
1299	Roadcut on both sides of US Route 150, beginning 0.1 mile west of Perryville Loop Road and 0.7 miles west of intersection with Kentucky State Route 2758 (Simmstown Road), and continuing for 0.9 miles east
1300	Roadcut on east side of US Route 127, 3.1 miles south of intersection with Kentucky State Route 78 at Hustonville, and 0.5 mile north of Lincoln-Casey county line
1301	Roadcut on northeast side of AA highway (Kentucky State Route 9), 1.4 miles west of US Route 27 overpass
1302	Roadcuts on both sides of new US Route 62 and 68, east of Maysville and beginning 0.3 miles south of bridge over Ohio River
1303	Roadcuts on both sides of US Route 127, 1.5 miles north of Lincoln-Casey county line, and 2.1 miles south of intersection with Kentucky State Route 78 at Hustonville
1304	Two roadcuts on both sides of US Route 68, 0.4 and 0.9 miles west of intersection with Kentucky State Route 243
1305	Caesar Creek Dam
1306	4mi Cr
1307	Big 4 RR cut 14
1308	Bon Well Hill
1309	cuts 14-15
1310	Garr Hill

Appendix 1. Species distribution data

1311	Strophomenida	Strophomenidae	<i>Strophomena</i>	<i>planumbona</i>	CiMNH	21377	
1312	Strophomenida	Strophomenidae	<i>Strophomena</i>	<i>planumbona</i>	Field		IN-JE-0001
1313	Strophomenida	Strophomenidae	<i>Strophomena</i>	<i>planumbona</i>	Field		
1314	Strophomenida	Strophomenidae	<i>Strophomena</i>	<i>planumbona</i>	Field		
1315	Strophomenida	Strophomenidae	<i>Strophomena</i>	<i>planumbona</i>	Field		IN-FR-0005
1316	Strophomenida	Strophomenidae	<i>Strophomena</i>	<i>planumbona</i>	CiMNH	18936	
1317	Strophomenida	Strophomenidae	<i>Strophomena</i>	<i>planumbona</i>	CiMNH	21368	
1318	Strophomenida	Strophomenidae	<i>Strophomena</i>	<i>planumbona</i>	CiMNH	18628	
1319	Strophomenida	Strophomenidae	<i>Strophomena</i>	<i>planumbona</i>	CiMNH	17423	
1320	Strophomenida	Strophomenidae	<i>Strophomena</i>	<i>planumbona</i>	CiMNH	23875	
1321	Strophomenida	Strophomenidae	<i>Strophomena</i>	<i>planumbona</i>	Holland and Patzkowsky 2007		72868
1322	Strophomenida	Strophomenidae	<i>Strophomena</i>	<i>planumbona</i>	Holland and Patzkowsky 2007		72579
1323	Strophomenida	Strophomenidae	<i>Strophomena</i>	<i>planumbona</i>	Holland and Patzkowsky 2007		72937
1324	Strophomenida	Strophomenidae	<i>Strophomena</i>	<i>planumbona</i>	Holland and Patzkowsky 2007		72882
1325	Strophomenida	Strophomenidae	<i>Strophomena</i>	<i>planumbona</i>	Holland and Patzkowsky 2007		72873
1326	Strophomenida	Strophomenidae	<i>Strophomena</i>	<i>planumbona</i>	Holland and Patzkowsky 2007		72432
1327	Strophomenida	Strophomenidae	<i>Strophomena</i>	<i>planumbona</i>	Holland and Patzkowsky 2007		73098
1328	Strophomenida	Strophomenidae	<i>Strophomena</i>	<i>planumbona</i>	Holland and Patzkowsky 2007		72622
1329	Strophomenida	Strophomenidae	<i>Strophomena</i>	<i>planumbona</i>	Holland and Patzkowsky 2007		73109
1330	Strophomenida	Strophomenidae	<i>Strophomena</i>	<i>planumbona</i>	Holland and Patzkowsky 2007		72880
1331	Strophomenida	Strophomenidae	<i>Strophomena</i>	<i>planumbona</i>	Holland and Patzkowsky 2007		73064
1332	Strophomenida	Strophomenidae	<i>Strophomena</i>	<i>planumbona</i>	CiMNH	5416	
1333	Strophomenida	Strophomenidae	<i>Strophomena</i>	<i>sulcata</i>	CiMNH	6186	
1334	Strophomenida	Strophomenidae	<i>Strophomena</i>	<i>sulcata</i>	CiMNH	28664	
1335	Strophomenida	Strophomenidae	<i>Strophomena</i>	<i>sulcata</i>	CiMNH	12931	
1336	Strophomenida	Strophomenidae	<i>Strophomena</i>	<i>sulcata</i>	CiMNH	21354	
1337	Strophomenida	Strophomenidae	<i>Strophomena</i>	<i>sulcata</i>	CiMNH	23872	
1338	Strophomenida	Strophomenidae	<i>Strophomena</i>	<i>sulcata</i>	CiMNH	18579	
1339	Strophomenida	Strophomenidae	<i>Strophomena</i>	<i>sulcata</i>	CiMNH	23872	
1340	Strophomenida	Strophomenidae	<i>Strophomena</i>	<i>sulcata</i>	CiMNH	5421	
1341	Strophomenida	Strophomenidae	<i>Strophomena</i>	<i>sulcata</i>	CiMNH	18675	
1342	Strophomenida	Strophomenidae	<i>Strophomena</i>	<i>vetusta</i>	MUGM	369	1.1A7
1343	Strophomenida	Strophomenidae	<i>Strophomena</i>	<i>vetusta</i>	Field		OH-WA-0003
1344	Strophomenida	Strophomenidae	<i>Strophomena</i>	<i>vetusta</i>	MUGM	338	2.60E+11
1345	Strophomenida	Strophomenidae	<i>Strophomena</i>	<i>vetusta</i>	Field		
1346	Strophomenida	Strophomenidae	<i>Strophomena</i>	<i>vetusta</i>	CiMNH	2.1I-65	
1347	Strophomenida	Strophomenidae	<i>Strophomena</i>	<i>vetusta</i>	MUGM	370	
1348	Strophomenida	Strophomenidae	<i>Strophomena</i>	<i>vetusta</i>	Holland and Patzkowsky 2007		72578
1349	Strophomenida	Strophomenidae	<i>Strophomena</i>	<i>vetusta</i>	Holland and Patzkowsky 2007		72690
1350	Strophomenida	Strophomenidae	<i>Strophomena</i>	<i>vetusta</i>	CiMNH	28480	
1351	Strophomenida	Strophomenidae	<i>Strophomena</i>	<i>vetusta</i>	CiMNH	5410	
1352	Strophomenida	Strophomenidae	<i>Strophomena</i>	<i>vetusta</i>	Holland and Patzkowsky 2007		72455
1353	Strophomenida	Strophomenidae	<i>Tetraphalerella</i>	<i>neglecta</i>	Field		IN-FR-0001
1354	Strophomenida	Strophomenidae	<i>Tetraphalerella</i>	<i>neglecta</i>	Field		OH-WA-0001
1355	Strophomenida	Strophomenidae	<i>Tetraphalerella</i>	<i>neglecta</i>		380	
1356	Strophomenida	Strophomenidae	<i>Tetraphalerella</i>	<i>neglecta</i>	CiMNH	28666	
1357	Strophomenida	Strophomenidae	<i>Tetraphalerella</i>	<i>neglecta</i>	Field		IN-FR-0003
1358	Strophomenida	Strophomenidae	<i>Tetraphalerella</i>	<i>neglecta</i>	Field		
1359	Strophomenida	Strophomenidae	<i>Tetraphalerella</i>	<i>neglecta</i>	Field		IN-FR-0005
1360	Strophomenida	Strophomenidae	<i>Tetraphalerella</i>	<i>neglecta</i>	CiMNH	21376	
1361	Strophomenida	Strophomenidae	<i>Tetraphalerella</i>	<i>neglecta</i>	CiMNH	PA93.20.81	
1362	Strophomenida	Strophomenidae	<i>Tetraphalerella</i>	<i>neglecta</i>	Holland and Patzkowsky 2007		72440
1363	Atrypida	Anazygidae	<i>Zygospira</i>	<i>cincinnatiensis</i>	Holland and Patzkowsky 2007		72642
1364	Atrypida	Anazygidae	<i>Zygospira</i>	<i>cincinnatiensis</i>	Holland and Patzkowsky 2007		73013
1365	Atrypida	Anazygidae	<i>Zygospira</i>	<i>cincinnatiensis</i>	CiMNH	28127	
1366	Atrypida	Anazygidae	<i>Zygospira</i>	<i>cincinnatiensis</i>	MUGM	26372	1.23C13
1367	Atrypida	Anazygidae	<i>Zygospira</i>	<i>cincinnatiensis</i>	CiMNH	18930	

Appendix 1. Species distribution data

1311	Richmondian	C5	Waynesville		OH	Clinton	Blanchester	C5	39.238170	-84.022960
1312	Richmondian	C5	Liberty		IN	Jefferson	Madison	C5	38.775880	-85.363800
1313	Richmondian	C5	Liberty		KY	Boyle		C5	37.661300	-85.159400
1314	Richmondian	C5	Liberty		IN	Wayne	Richmond	C5	37.748466	-84.297716
1315	Richmondian	C5	Liberty		IN	Franklin	Brookville	C5	39.341966	-84.953650
1316	Richmondian	C5	Waynesville		OH	Clinton	Clarksville	C5	39.406140	-83.987000
1317	Richmondian	C5	Waynesville		IN	Dearborn	Weisburg	C5	39.217960	-85.045940
1318	Richmondian	C5	Waynesville		OH	Clinton	Blanchester	C5	39.238170	-83.989030
1319	Richmondian	C5	Waynesville		OH	Butler	Oxford	C5	39.506870	-84.745100
1320	Richmondian	C5	Whitewater	Liberty	OH	Preble	Camden	C5	39.628910	-84.648690
1321	Richmondian	C5	Whitewater		OH	Clinton		C5	39.3894	-83.927
1322	Richmondian	C5	Whitewater	Lower	OH	Warren		C5	39.48027	-84.5712
1323	Richmondian	C5	Waynesville		IN	Franklin		C5	39.43858	-85.0052
1324	Richmondian	C5	Liberty		OH	Warren		C5	39.47997	-84.04893
1325	Richmondian	C5	Waynesville		OH	Warren		C5	39.48127	-84.6817
1326	Richmondian	C5	Liberty		IN	Union		C5	39.48798	-84.94867
1327	Richmondian	C5	Liberty		IN	Jefferson		C5	38.77827	-85.36523
1328	Richmondian	C5	Waynesville		OH	Warren		C5	39.54853	-84.05233
1329	Richmondian	C5	Bull Fork		KY	Mason		C5	38.59637	-83.71927
1330	Richmondian	C5	Waynesville		OH	Warren		C5	39.48693	-84.6558
1331	Richmondian	C5	Bull Fork		KY	Fleming		C5	38.40108	-83.72325
1332	Richmondian	C6	Whitewater	Upper Whitewater	OH	Preble	Camden	C6	39.627020	-84.664720
1333	Richmondian	C5	Waynesville		OH	Clinton	Blanchester	C5	39.293110	-83.988880
1334	Richmondian	C5	Whitewater		OH	Preble	Camden	C5	39.627020	-84.664720
1335	Richmondian	C5	Whitewater		IN	Wayne	Richmond	C5	39.828333	-84.892500
1336	Richmondian	C5	Waynesville	Blanchester	IN	Ripley	Versailles	C5	39.080720	-85.250430
1337	Richmondian	C5	Waynesville		IN	Dearborn	Weisburg	C5	39.217960	-85.045940
1338	Richmondian	C5	Whitewater		OH	Butler	Oxford	C5	39.506870	-84.745100
1339	Richmondian	C5	Waynesville		OH	Preble	Camden	C5	39.628910	-84.648690
1340	Richmondian	C6	Whitewater	Upper Whitewater	OH	Preble	Camden	C6	39.627020	-84.664720
1341	Richmondian	C6	Elkhorn		IN	Franklin	Hamburg	C6	39.380700	-85.250890
1342	Richmondian	C5	Whitewater	Lower Whitewater	OH	Butler	Oxford	C5	39.534100	-84.737760
1343	Richmondian	C5	Liberty		OH	Warren		C5	39.477600	-84.063010
1344	Richmondian	C5	Liberty		IN	Dearborn	Weisburg	C5	39.217960	-85.045940
1345	Richmondian	C5	Liberty		KY	Boyle	Perryville	C5	37.661300	-85.159400
1346	Richmondian	C5	Whitewater		IN	Wayne	Richmond	C5	39.828333	-84.892500
1347	Richmondian	C5	Whitewater		IN	Wayne	Richmond	C5	39.759790	-84.907490
1348	Richmondian	C5	Liberty		OH	Warren		C5	39.48027	-84.5712
1349	Richmondian	C5	Bardstown		KY	Nelson		C5	37.76737	-85.35557
1350	Richmondian	C6	Elkhorn		IN	Ripley	Versailles	C6	39.080440	-85.249730
1351	Richmondian	C6	Whitewater	Upper Whitewater	OH	Preble	Camden	C6	39.627020	-84.664720
1352	Richmondian	C6	Whitewater	Upper	IN	Wayne		C6	39.78728	-84.90183
1353	Richmondian	C5	Liberty		IN	Franklin	Brookville	C5	39.437950	-84.987400
1354	Richmondian	C5	Waynesville		OH	Warren		C5	39.477600	-84.063010
1355	Richmondian	C5	Waynesville		OH	Warren		C5	39.480860	-84.047570
1356	Richmondian	C5	Whitewater		OH	Preble	Camden	C5	39.627020	-84.664720
1357	Richmondian	C5	Liberty		IN	Franklin	Brookville	C5	39.480383	-84.948633
1358	Richmondian	C5	Waynesville		IN	Wayne	Richmond	C5	37.748466	-84.297716
1359	Richmondian	C5	Liberty		IN	Franklin	Brookville	C5	39.341966	-84.953650
1360	Richmondian	C5	Waynesville	Blanchester	OH	Clinton	Blanchester	C5	39.238170	-84.022960
1361	Richmondian	C5	Waynesville	Blanchester	OH	Warren	Roachester	C5	39.356740	-84.096960
1362	Richmondian	C5	Liberty		IN	Union		C5	39.48798	-84.94867
1363	Edenian	C1	Kope		OH	Campbell		C1	39.0059	-84.4501
1364	Edenian	C1	Kope		KY	Mason		C1	38.68263	-83.79007
1365	Maysvillian	C2	Fairview	Mt. Hope	OH	Hamilton	Bald Knob	C2	39.121726	-84.547444
1366	Maysvillian	C2	Fairview	Fairmount	OH	Hamilton	Cheviot	C2	39.130892	-84.711058
1367	Maysvillian	C2	Fairview	Mt. Hope	OH	Hamilton	Cincinnati	C2	39.130892	-84.711058

Appendix 1. Species distribution data

1311	Hunter Cr. And Upper Stonelick Cr.
1312	Madison-421N
1313	Perryville -1
1314	Richmond
1315	South Gate Hill
1316	Stony creek
1317	
1318	
1319	
1320	
1321	Cuts along sides of emergency spillway from Cowan Lake, immediately west of Ohio State Route 730
1322	Exposures along walls and floor of emergency spillway for Caesar Creek Lake
1323	Hillside exposure flanking emergency spillway adjacent to dam of Brookville Lake
1324	Multiple streamside exposures along Flat Fork, upstream from where stream empties into Caesar Creek Lake
1325	Multiple streamside exposures along unnamed stream that flows west of end of emergency spillway for Caesar Creek Lake and northward into Caesar Creek
1326	Roadcut on both sides of Indiana State Route 101, 5.0 miles north of Brookville
1327	Roadcut on east side of US Route 421, 3.1 miles north of intersection with Indiana State Route 56 in Madison
1328	Roadcut on west side of US Route 42, 1.2 miles north of Main Street in Waynesville
1329	Roadcuts on both sides of AA highway (Kentucky State Route 9), 2.4 miles east of intersection with Kentucky State Route 11
1330	Streamside exposures along creek that empties immediately below dam outlet for Caesar Creek Lake and that empties into Caesar's Creek from north side
1331	Three roadcuts on both sides Kentucky State Route 32, beginning 0.6 miles southeast of the intersection of with Kentucky State Route 11 on the south side of Flemingsburg and continuing for 0.6 miles to the southeast.
1332	Devil's Backbone
1333	C&O RR
1334	Devil's Backbone Creek
1335	Piano Factory
1336	Wash Bank, Cedar Dr.
1337	
1338	
1339	
1340	Devil's Backbone
1341	Road cut
1342	Dodges Ck, .5mi N of Oxford
1343	Flat Fork Falls
1344	Harpers Branch, Flowing North
1345	Perryville -1
1346	Piano Factory
1347	Rt 27 Roadcut, 2mi S of Richmond
1348	Exposures along walls and floor of emergency spillway for Caesar Creek Lake
1349	Roadcut on west side of US Route 150, 0.6 miles west of Nelson / Washington county line
1350	cuts along road at Cedar Creek
1351	Devil's Backbone
1352	Roadcuts on both sides of US Route 27, 0.8 miles north of intersection with Beelor Road
1353	Bon Well Hill
1354	Caesar Creek Spillway
1355	Caesars Creek Damsite
1356	Devil's Backbone Creek
1357	Garr Hill
1358	Richmond
1359	South Gate Hill
1360	U. Stonelick & Hunter's Crs.
1361	
1362	Roadcut on both sides of Indiana State Route 101, 5.0 miles north of Brookville
1363	Roadcut on northeast side of AA highway (Kentucky State Route 9), 1.4 miles west of US Route 27 overpass
1364	Roadcuts on both sides of new US Route 62 and 68, east of Maysville and beginning 0.3 miles south of bridge over Ohio River
1365	Bald Knob, Cincinnati
1366	Muddy Creek
1367	Muddy Creek (near Cincy?)

Appendix 1. Species distribution data

1368	Atrypida	Anazygidae	<i>Zygospira</i>	<i>cincinnatiensis</i>	CiMNH	24243	
1369	Atrypida	Anazygidae	<i>Zygospira</i>	<i>cincinnatiensis</i>	MUGM	7613	
1370	Atrypida	Anazygidae	<i>Zygospira</i>	<i>cincinnatiensis</i>	Holland and Patzkowsky 2007		72668
1371	Atrypida	Anazygidae	<i>Zygospira</i>	<i>cincinnatiensis</i>	MUGM	11544	
1372	Atrypida	Anazygidae	<i>Zygospira</i>	<i>modesta</i>	CiMNH	27980	
1373	Atrypida	Anazygidae	<i>Zygospira</i>	<i>modesta</i>	CiMNH	19065	
1374	Atrypida	Anazygidae	<i>Zygospira</i>	<i>modesta</i>	Holland and Patzkowsky 2007		72766
1375	Atrypida	Anazygidae	<i>Zygospira</i>	<i>modesta</i>	Holland and Patzkowsky 2007		72728
1376	Atrypida	Anazygidae	<i>Zygospira</i>	<i>modesta</i>	Holland and Patzkowsky 2007		72637
1377	Atrypida	Anazygidae	<i>Zygospira</i>	<i>modesta</i>	Holland and Patzkowsky 2007		72954
1378	Atrypida	Anazygidae	<i>Zygospira</i>	<i>modesta</i>	Holland and Patzkowsky 2007		72998
1379	Atrypida	Anazygidae	<i>Zygospira</i>	<i>modesta</i>	Holland and Patzkowsky 2007		72746
1380	Atrypida	Anazygidae	<i>Zygospira</i>	<i>modesta</i>	Holland and Patzkowsky 2007		72674
1381	Atrypida	Anazygidae	<i>Zygospira</i>	<i>modesta</i>	Holland and Patzkowsky 2007		72695
1382	Atrypida	Anazygidae	<i>Zygospira</i>	<i>modesta</i>	MUGM	26300	
1383	Atrypida	Anazygidae	<i>Zygospira</i>	<i>modesta</i>	MUGM	11558	
1384	Atrypida	Anazygidae	<i>Zygospira</i>	<i>modesta</i>	MUGM	11555	
1385	Atrypida	Anazygidae	<i>Zygospira</i>	<i>modesta</i>	MUGM	7582	
1386	Atrypida	Anazygidae	<i>Zygospira</i>	<i>modesta</i>	CiMNH	19108	
1387	Atrypida	Anazygidae	<i>Zygospira</i>	<i>modesta</i>	MUGM	11548	
1388	Atrypida	Anazygidae	<i>Zygospira</i>	<i>modesta</i>	Holland and Patzkowsky 2007		73126
1389	Atrypida	Anazygidae	<i>Zygospira</i>	<i>modesta</i>	Holland and Patzkowsky 2007		72888
1390	Atrypida	Anazygidae	<i>Zygospira</i>	<i>modesta</i>	Holland and Patzkowsky 2007		72751
1391	Atrypida	Anazygidae	<i>Zygospira</i>	<i>modesta</i>	Holland and Patzkowsky 2007		72721
1392	Atrypida	Anazygidae	<i>Zygospira</i>	<i>modesta</i>	Holland and Patzkowsky 2007		72737
1393	Atrypida	Anazygidae	<i>Zygospira</i>	<i>modesta</i>	Holland and Patzkowsky 2007		72665
1394	Atrypida	Anazygidae	<i>Zygospira</i>	<i>modesta</i>	Holland and Patzkowsky 2007		72793
1395	Atrypida	Anazygidae	<i>Zygospira</i>	<i>modesta</i>	Holland and Patzkowsky 2007		72707
1396	Atrypida	Anazygidae	<i>Zygospira</i>	<i>modesta</i>	Holland and Patzkowsky 2007		73084
1397	Atrypida	Anazygidae	<i>Zygospira</i>	<i>modesta</i>	Holland and Patzkowsky 2007		72705
1398	Atrypida	Anazygidae	<i>Zygospira</i>	<i>modesta</i>	Holland and Patzkowsky 2007		72699
1399	Atrypida	Anazygidae	<i>Zygospira</i>	<i>modesta</i>	Krumpolz, M.S., 1980		Unit 57
1400	Atrypida	Anazygidae	<i>Zygospira</i>	<i>modesta</i>	Field		
1401	Atrypida	Anazygidae	<i>Zygospira</i>	<i>modesta</i>	Krumpolz, M.S., 1980		Unit 24
1402	Atrypida	Anazygidae	<i>Zygospira</i>	<i>modesta</i>	Krumpolz, M.S., 1980		Unit 8
1403	Atrypida	Anazygidae	<i>Zygospira</i>	<i>modesta</i>	Roy H. Reinhart, 1977		Stop 5
1404	Atrypida	Anazygidae	<i>Zygospira</i>	<i>modesta</i>	MUGM	11540	
1405	Atrypida	Anazygidae	<i>Zygospira</i>	<i>modesta</i>	Holland Ph. D, 1990		
1406	Atrypida	Anazygidae	<i>Zygospira</i>	<i>modesta</i>	Holland Ph. D, 1990		
1407	Atrypida	Anazygidae	<i>Zygospira</i>	<i>modesta</i>	Richard Hicklin, MS, 1933		Station F
1408	Atrypida	Anazygidae	<i>Zygospira</i>	<i>modesta</i>	Richard Hicklin, MS, 1933		Station X
1409	Atrypida	Anazygidae	<i>Zygospira</i>	<i>modesta</i>	Richard Hicklin, MS, 1933		Station 6-F
1410	Atrypida	Anazygidae	<i>Zygospira</i>	<i>modesta</i>	Holland and Patzkowsky 2007		72997
1411	Atrypida	Anazygidae	<i>Zygospira</i>	<i>modesta</i>	Holland and Patzkowsky 2007		72591
1412	Atrypida	Anazygidae	<i>Zygospira</i>	<i>modesta</i>	Holland and Patzkowsky 2007		72909
1413	Atrypida	Anazygidae	<i>Zygospira</i>	<i>modesta</i>	Holland and Patzkowsky 2007		73041
1414	Atrypida	Anazygidae	<i>Zygospira</i>	<i>modesta</i>	Holland and Patzkowsky 2007		72819
1415	Atrypida	Anazygidae	<i>Zygospira</i>	<i>modesta</i>	Holland and Patzkowsky 2007		72936
1416	Atrypida	Anazygidae	<i>Zygospira</i>	<i>modesta</i>	Holland and Patzkowsky 2007		73034
1417	Atrypida	Anazygidae	<i>Zygospira</i>	<i>modesta</i>	Holland and Patzkowsky 2007		72670
1418	Atrypida	Anazygidae	<i>Zygospira</i>	<i>modesta</i>	CiMNH	28627	
1419	Atrypida	Anazygidae	<i>Zygospira</i>	<i>modesta</i>	CiMNH	19107	
1420	Atrypida	Anazygidae	<i>Zygospira</i>	<i>modesta</i>	MUGM	11554	
1421	Atrypida	Anazygidae	<i>Zygospira</i>	<i>modesta</i>	CiMNH	23868	
1422	Atrypida	Anazygidae	<i>Zygospira</i>	<i>modesta</i>	MUGM	26315	1.1L
1423	Atrypida	Anazygidae	<i>Zygospira</i>	<i>modesta</i>	CiMNH	19056	
1424	Atrypida	Anazygidae	<i>Zygospira</i>	<i>modesta</i>	MUGM	26298	

Appendix 1. Species distribution data

1368	Maysvillian	C2	Fairview	Mt. Hope	KY	Kenton	Covington	C2	39.070990	-84.510200
1369	Maysvillian	C2	Fairview	Fairmount	OH	Hamilton	Cincinnati	C2	39.161938	-84.456680
1370	Maysvillian	C2	Fairview		OH	Campbell		C2	39.0059	-84.4501
1371	Maysvillian	C2	Fairview	Fairmount	OH	Hamilton	Cincinnati	C2	39.161938	-84.456680
1372	Edenian	C1	McMicken		OH	Hamilton	Cincinnati	C1	39.121667	-84.574444
1373	Edenian	C1	Fulton		OH	Hamilton	Cincinnati	C1	39.113889	-84.658056
1374	Edenian	C1	Kope		KY	Kenton		C1	39.00833	-84.52972
1375	Edenian	C1	Kope		KY	Kenton		C1	39.0297	-84.54167
1376	Edenian	C1	Kope		OH	Campbell		C1	39.0059	-84.4501
1377	Edenian	C1	Kope		KY	Bracken		C1	38.78625	-84.21023
1378	Edenian	C1	Kope		KY	Mason		C1	38.68263	-83.79007
1379	Maysvillian	C1	Clays Ferry		KY	Washington		C1	37.64983	-85.07308
1380	Edenian	C1	Kope	Fulton	OH	Campbell		C1	39.0333	-84.4167
1381	Maysvillian	C1	Clays Ferry		KY	Marion		C1	37.58577	-85.07163
1382	Maysvillian	C2	McMillan	Bellevue	KY	Shelby		C2	38.182467	-85.218117
1383	Maysvillian	C2	Fairview	Fairmount	OH	Hamilton	Cincinnati	C2	39.139722	-84.424167
1384	Maysvillian	C2	Fairview	Fairmount	OH	Warren	Morrow	C2	39.355966	-84.109232
1385	Maysvillian	C2	McMillan	Bellevue	OH	Warren	Morrow	C2	39.014167	-84.131667
1386	Maysvillian	C2	McMillan	Bellevue	OH	Hamilton	Cincinnati	C2	39.123333	-84.498056
1387	Maysvillian	C2	Fairview	Fairmount	OH	Warren	Edgewood	C2	39.545890	-84.136790
1388	Maysvillian	C2	Miamitown		OH	Hamilton		C2	39.29655	-84.4043
1389	Maysvillian	C2	Bellevue		OH	Clermont		C2	39.17193	-84.12193
1390	Maysvillian	C2	Grant Lake		KY	Washington		C2	37.66092	-85.17058
1391	Maysvillian	C2	Calloway Creek		KY	Lincoln		C2	37.43403	-84.84982
1392	Maysvillian	C2	Calloway Creek		KY	Garrard		C2	37.58812	-84.47962
1393	Maysvillian	C2	Fairview		OH	Campbell		C2	39.0059	-84.4501
1394	Maysvillian	C2	Bellevue		KY	Kenton		C2	39.02778	-84.51055
1395	Maysvillian	C2	Calloway Creek		KY	Lincoln		C2	37.44852	-84.83527
1396	Maysvillian	C2	Bellevue		KY	Mason		C2	38.68263	-83.79007
1397	Maysvillian	C2	Calloway Creek		KY	Lincoln		C2	37.46393	-84.82255
1398	Maysvillian	C2	Calloway Creek		KY	Marion		C2	37.58577	-85.07163
1399	Maysvillian	C3	McMillan	Mt. Auburn	OH	Hamilton	Barnesburg	C3	39.2292	-84.62505
1400	Maysvillian	C3	McMillan	Mt. Auburn	KY	Madison		C3	37.709050	-84.314850
1401	Maysvillian	C3	McMillan	Mt. Auburn	OH	Hamilton	Dry Ridge	C3	39.2833	-84.6
1402	Maysvillian	C3	McMillan	Mt. Auburn	OH	Hamilton	Forest Park	C3	39.2251	-84.5251
1403	Maysvillian	C3	McMillan	Corryville/Mt. Auburn	OH	Butler	Middletown	C3	39.5	-84.4167
1404	Richmondian	C3	Mt. Auburn		OH	Hamilton	Cincinnati	C3	39.126667	-84.501667
1405	Maysvillian	C3	Mt. Auburn		IN	Jefferson	Madison	C3	38.7494	-85.3764
1406	Maysvillian	C3	Mt. Auburn		OH	Hamilton	Barnesburg	C3	39.2292	-84.62505
1407	Maysvillian	C3	McMillan	Corryville	KY	Bath	Owingsville	C3	38.1478	-83.825
1408	Maysvillian	C3	McMillan	Mt. Auburn	KY	Fleming	Concord	C3	38.3035	-83.7813
1409	Maysvillian	C3	McMillan	Mt. Auburn	KY	Fleming	Flemingsburg	C3	38.3694	-83.7375
1410	Maysvillian	C3	Corryville		OH	Hamilton		C3	39.29655	-84.4043
1411	Maysvillian	C3	Corryville		OH	Butler		C3	39.42507	-84.60073
1412	Maysvillian	C3	Corryville		OH	Clermont		C3	39.17193	-84.12193
1413	Maysvillian	C3	Corryville		OH	Warren		C3	39.32828	-84.6783
1414	Maysvillian	C3	Mount Auburn		OH	Brown		C3	38.87033	-83.91333
1415	Maysvillian	C3	Mount Auburn		OH	Butler		C3	39.40603	-84.50192
1416	Maysvillian	C3	Corryville		KY	Mason		C3	38.68263	-83.79007
1417	Maysvillian	C3	Stingy Creek		KY	Lincoln		C3	37.57361	-84.61361
1418	Richmondian	C4	Arnheim		OH	Butler	Maud	C4	39.345500	-84.386500
1419	Richmondian	C4	Arnheim		OH	Hamilton	Bridgetown	C4	39.153190	-84.637300
1420	Richmondian	C4	Arnheim		OH	Hamilton	Westwood	C4	39.159167	-84.651667
1421	Richmondian	C4	Arnheim		OH	Hamilton	College Hill	C4	39.202160	-84.547050
1422	Richmondian	C4	Arnheim		OH	Butler		C4	39.529760	-84.740250
1423	Richmondian	C4	Oregonia		OH	Warren	Oregonia	C4	39.450830	-84.096210
1424	Richmondian	C4	Arnheim		KY	Lincoln	Standford	C4	37.518056	-84.677222

Appendix 1. Species distribution data

1368	Schlosser's Quarry, Covington
1369	
1370	Roadcut on northeast side of AA highway (Kentucky State Route 9), 1.4 miles west of US Route 27 overpass
1371	
1372	N end of Bald Knob cut, Cincinnati
1373	Rapid Run, Cincinnati
1374	Hillside exposure behind White Castle food processing plant on Kentucky State Route 17, 1.0 miles south of I-275 overpass
1375	Roadcut on north side of Kentucky State Route 371 (Orphanage Road), 0.6 miles west of intersection with Kentucky State Route 17
1376	Roadcut on northeast side of AA highway (Kentucky State Route 9), 1.4 miles west of US Route 27 overpass
1377	Roadcut on south side of AA highway (Kentucky State Route 9), immediately southeast of intersection with Holts Creek Road
1378	Roadcuts on both sides of new US Route 62 and 68, east of Maysville and beginning 0.3 miles south of bridge over Ohio River
1379	Series of roadcuts primarily on north side of US Route 150, beginning at 0.6 miles west of intersection with old US Route 150 and continuing east for 0.4 miles
1380	Stream exposures along Duck Creek, immediately southwest of Kentucky State Route 1998 (Industrial Road), 0.3 miles south of intersection with Kentucky State Route 8
1381	Two roadcuts on both sides of US Route 68, 0.4 and 0.9 miles west of intersection with Kentucky State Route 243
1382	2.1mi S. Taylorsville Rd.
1383	Erie Ave.
1384	RR cut 1mi E of Morrow
1385	Second Ck Morrow
1386	Wilkinson & Symmes St, Cincinnati
1387	
1388	Hillside exposure at Trammel Fossil Park at north end of Tramway Road in Sharonville
1389	Multiple streamside exposures along Stonelick Creek, downstream from Ohio State Route 131 bridge. Private property; permission required for entry.
1390	Roadcut on both sides of US Route 150, beginning 0.1 mile west of Perryville Loop Road and 0.7 miles west of intersection with Kentucky State Route 2758 (Simmstown Road), and continuing for 0.9 miles east
1391	Roadcut on east side of US Route 127, 3.1 miles south of intersection with Kentucky State Route 78 at Hustonville, and 0.5 mile north of Lincoln-Casey county line
1392	Roadcut on north side of new Kentucky State Route 52, approximately 5.8 miles east of Lancaster
1393	Roadcut on northeast side of AA highway (Kentucky State Route 9), 1.4 miles west of US Route 27 overpass
1394	Roadcut on northeast side of Mason Road, 0.2 miles southeast of intersection with Taylor Mill Road
1395	Roadcut on west side of US Route 127, 1.7 miles north of Lincoln-Casey county line, and 1.9 miles south of intersection with Kentucky State Route 78 at Hustonville
1396	Roadcuts on both sides of new US Route 62 and 68, east of Maysville and beginning 0.3 miles south of bridge over Ohio River
1397	Roadcuts on both sides of US Route 127, 1.5 miles north of Lincoln-Casey county line, and 2.1 miles south of intersection with Kentucky State Route 78 at Hustonville
1398	Two roadcuts on both sides of US Route 68, 0.4 and 0.9 miles west of intersection with Kentucky State Route 243
1399	Base of section at the southeast end of outcrop, 1.4 m higher than the level of the first lightpost on the east side of Blue Rock Road just northwest of the exit ramp from Cross Country Highway.
1400	Bybee -2
1401	On U.S. 27, 1.5 miles north of Interstate 275.
1402	On Waycross Road, 0.4 miles north of intersection with Winton Road. Stream exposure south of culvert.
1403	Railroad cut on armco steel property in Oneida (permission required)
1404	Reading Rd. and McMillan St.
1405	Roadcut on east site of U. S. Route 421, 0.9 miles north of Indiana State Route 56 in Madison.
1406	Roadcuts on Blue Rock Road, 0.1 miles north of intersection with Cross Country Highway, 0.3 miles southeast of Interstate 275.
1407	
1408	
1409	
1410	Hillside exposure at Trammel Fossil Park at north end of Tramway Road in Sharonville
1411	Hillside exposure behind Wal-Mart at Ohio State Route 177 and Washington Boulevard, 0.3 miles southeast of intersection of Ohio State Routes 130 and 177
1412	Multiple streamside exposures along Stonelick Creek, downstream from Ohio State Route 131 bridge. Private property; permission required for entry.
1413	Multiple streamside exposures on Lick Run upstream and downstream of bridge for Ohio State Route 132
1414	Roadcut on north side of Ohio State Route 125, west of Georgetown and on east side of valley for White Oak Creek
1415	Roadcuts on both sides of Bypass State Route 4, 0.3 miles south of intersection with Ohio State Route 4 and at overpass of Milliken Road
1416	Roadcuts on both sides of new US Route 62 and 68, east of Maysville and beginning 0.3 miles south of bridge over Ohio River
1417	Roadcuts on both sides of US Route 27, 0.8 miles south of Garrard - Lincoln county line
1418	Big Four RR cut, 1 mi below Maud
1419	C&O RR cut, Bridgetown
1420	Cincinnati
1421	College Hill, greater Cincy
1422	Four Mile Ck
1423	Oregonia
1424	

Appendix 1. Species distribution data

1425	Atrypida	Anazygidae	<i>Zygospira</i>	<i>modesta</i>	MUGM	26304	
1426	Atrypida	Anazygidae	<i>Zygospira</i>	<i>modesta</i>	MUGM	11568	
1427	Atrypida	Anazygidae	<i>Zygospira</i>	<i>modesta</i>	Holland and Patzkowsky 2007		72910
1428	Atrypida	Anazygidae	<i>Zygospira</i>	<i>modesta</i>	Holland and Patzkowsky 2007		72720
1429	Atrypida	Anazygidae	<i>Zygospira</i>	<i>modesta</i>	Holland and Patzkowsky 2007		72915
1430	Atrypida	Anazygidae	<i>Zygospira</i>	<i>modesta</i>	Holland and Patzkowsky 2007		72963
1431	Atrypida	Anazygidae	<i>Zygospira</i>	<i>modesta</i>	Holland and Patzkowsky 2007		72920
1432	Atrypida	Anazygidae	<i>Zygospira</i>	<i>modesta</i>	Holland and Patzkowsky 2007		72612
1433	Atrypida	Anazygidae	<i>Zygospira</i>	<i>modesta</i>	Holland and Patzkowsky 2007		72967
1434	Atrypida	Anazygidae	<i>Zygospira</i>	<i>modesta</i>	Holland and Patzkowsky 2007		72540
1435	Atrypida	Anazygidae	<i>Zygospira</i>	<i>modesta</i>	Holland and Patzkowsky 2007		72812
1436	Atrypida	Anazygidae	<i>Zygospira</i>	<i>modesta</i>	Holland and Patzkowsky 2007		73036
1437	Atrypida	Anazygidae	<i>Zygospira</i>	<i>modesta</i>	Holland and Patzkowsky 2007		72429
1438	Atrypida	Anazygidae	<i>Zygospira</i>	<i>modesta</i>	Holland and Patzkowsky 2007		72924
1439	Atrypida	Anazygidae	<i>Zygospira</i>	<i>modesta</i>	Holland and Patzkowsky 2007		72861
1440	Atrypida	Anazygidae	<i>Zygospira</i>	<i>modesta</i>	Holland and Patzkowsky 2007		72854
1441	Atrypida	Anazygidae	<i>Zygospira</i>	<i>modesta</i>	Holland and Patzkowsky 2007		72469
1442	Atrypida	Anazygidae	<i>Zygospira</i>	<i>modesta</i>	Holland and Patzkowsky 2007		73116
1443	Atrypida	Anazygidae	<i>Zygospira</i>	<i>modesta</i>	Holland and Patzkowsky 2007		72933
1444	Atrypida	Anazygidae	<i>Zygospira</i>	<i>modesta</i>	Holland and Patzkowsky 2007		72725
1445	Atrypida	Anazygidae	<i>Zygospira</i>	<i>modesta</i>	Holland and Patzkowsky 2007		73124
1446	Atrypida	Anazygidae	<i>Zygospira</i>	<i>modesta</i>	Holland and Patzkowsky 2007		72846
1447	Atrypida	Anazygidae	<i>Zygospira</i>	<i>modesta</i>	CiMNH	19088	
1448	Atrypida	Anazygidae	<i>Zygospira</i>	<i>modesta</i>	CiMNH	19093	
1449	Atrypida	Anazygidae	<i>Zygospira</i>	<i>modesta</i>	CiMNH	27696	
1450	Atrypida	Anazygidae	<i>Zygospira</i>	<i>modesta</i>	CiMNH	29234	
1451	Atrypida	Anazygidae	<i>Zygospira</i>	<i>modesta</i>	CiMNH	28542	
1452	Atrypida	Anazygidae	<i>Zygospira</i>	<i>modesta</i>	MUGM	26289	
1453	Atrypida	Anazygidae	<i>Zygospira</i>	<i>modesta</i>	MUGM	26319	
1454	Atrypida	Anazygidae	<i>Zygospira</i>	<i>modesta</i>	MUGM	26306	
1455	Atrypida	Anazygidae	<i>Zygospira</i>	<i>modesta</i>	CiMNH	28232	
1456	Atrypida	Anazygidae	<i>Zygospira</i>	<i>modesta</i>	CiMNH	19089	
1457	Atrypida	Anazygidae	<i>Zygospira</i>	<i>modesta</i>	CiMNH		
1458	Atrypida	Anazygidae	<i>Zygospira</i>	<i>modesta</i>		48816	
1459	Atrypida	Anazygidae	<i>Zygospira</i>	<i>modesta</i>	MUGM	26288	
1460	Atrypida	Anazygidae	<i>Zygospira</i>	<i>modesta</i>	MUGM	26285	1.43M4
1461	Atrypida	Anazygidae	<i>Zygospira</i>	<i>modesta</i>	MUGM	11567	
1462	Atrypida	Anazygidae	<i>Zygospira</i>	<i>modesta</i>	CiMNH	28235	
1463	Atrypida	Anazygidae	<i>Zygospira</i>	<i>modesta</i>	MUGM	26481	
1464	Atrypida	Anazygidae	<i>Zygospira</i>	<i>modesta</i>	Holland and Patzkowsky 2007		72863
1465	Atrypida	Anazygidae	<i>Zygospira</i>	<i>modesta</i>	Holland and Patzkowsky 2007		72579
1466	Atrypida	Anazygidae	<i>Zygospira</i>	<i>modesta</i>	Holland and Patzkowsky 2007		72927
1467	Atrypida	Anazygidae	<i>Zygospira</i>	<i>modesta</i>	Holland and Patzkowsky 2007		72942
1468	Atrypida	Anazygidae	<i>Zygospira</i>	<i>modesta</i>	Holland and Patzkowsky 2007		72544
1469	Atrypida	Anazygidae	<i>Zygospira</i>	<i>modesta</i>	Holland and Patzkowsky 2007		72876
1470	Atrypida	Anazygidae	<i>Zygospira</i>	<i>modesta</i>	Holland and Patzkowsky 2007		73035
1471	Atrypida	Anazygidae	<i>Zygospira</i>	<i>modesta</i>	Holland and Patzkowsky 2007		72431
1472	Atrypida	Anazygidae	<i>Zygospira</i>	<i>modesta</i>	Holland and Patzkowsky 2007		72433
1473	Atrypida	Anazygidae	<i>Zygospira</i>	<i>modesta</i>	Holland and Patzkowsky 2007		73096
1474	Atrypida	Anazygidae	<i>Zygospira</i>	<i>modesta</i>	Holland and Patzkowsky 2007		72472
1475	Atrypida	Anazygidae	<i>Zygospira</i>	<i>modesta</i>	Holland and Patzkowsky 2007		72691
1476	Atrypida	Anazygidae	<i>Zygospira</i>	<i>modesta</i>	Holland and Patzkowsky 2007		72623
1477	Atrypida	Anazygidae	<i>Zygospira</i>	<i>modesta</i>	Holland and Patzkowsky 2007		73063
1478	Atrypida	Anazygidae	<i>Zygospira</i>	<i>modesta</i>	CiMNH	5453	
1479	Atrypida	Anazygidae	<i>Zygospira</i>	<i>modesta</i>	MUGM	26292	
1480	Atrypida	Anazygidae	<i>Zygospira</i>	<i>modesta</i>	MUGM	26308	
1481	Atrypida	Anazygidae	<i>Zygospira</i>	<i>modesta</i>	MUGM	26297	

Appendix 1. Species distribution data

1425	Richmondian	C4	Arnheim		KY	Washington	Croakes and Booker	C4	37.781667	-85.308889
1426	Richmondian	C4	Arnheim		OH	Warren	Oregonia	C4	39.451408	-84.096107
1427	Richmondian	C4	Sunset		OH	Butler		C4	39.34342	-84.39478
1428	Richmondian	C4	Sunset		IN	Richmond		C4	37.74152	-84.25052
1429	Richmondian	C4	Sunset		OH	Butler		C4	39.37238	-84.38675
1430	Richmondian	C4	Sunset		OH	Hamilton		C4	39.13053	-84.61802
1431	Richmondian	C4	Sunset		OH	Butler		C4	39.37113	-84.38022
1432	Richmondian	C4	Sunset		OH	Butler		C4	39.42507	-84.60073
1433	Richmondian	C4	Oregonia		OH	Hamilton		C4	39.12922	-84.59657
1434	Richmondian	C4	Oregonia		OH	Warren		C4	39.48455	-84.635
1435	Richmondian	C4	Oregonia		OH	Warren		C4	39.48127	-84.6817
1436	Richmondian	C4	Oregonia		OH	Warren		C4	39.32828	-84.6783
1437	Richmondian	C4	Oregonia		IN	Franklin		C4	39.43694	-84.97806
1438	Richmondian	C4	Oregonia		OH	Butler		C4	39.5414	-84.34475
1439	Richmondian	C4	Sunset		KY	Mason		C4	38.50455	-83.75855
1440	Richmondian	C4	Sunset		KY	Fleming		C4	38.48523	-83.75887
1441	Richmondian	C4	Oregonia		IN	Franklin		C4	39.3425	-84.95358
1442	Richmondian	C4	Oregonia		KY	Mason		C4	38.58483	-83.70102
1443	Richmondian	C4	Sunset		OH	Butler		C4	39.40603	-84.50192
1444	Maysvillian	C4	Reba		KY	Lincoln		C4	37.57778	-84.61
1445	Richmondian	C4	Sunset		OH	Brown		C4	39.02827	-83.84772
1446	Richmondian	C4	Oregonia		OH	Clermont		C4	39.21567	-84.08497
1447	Richmondian	C5	Waynesville		OH	Butler	Oxford	C5	39.582890	-84.758110
1448	Richmondian	C5	Waynesville		OH	Preble	Camden	C5	39.632200	-84.638910
1449	Richmondian	C5	Waynesville	Clarksville	IN	Dearborn	Weisburg	C5	39.217960	-85.045940
1450	Richmondian	C5	Waynesville		OH	Butler	Oxford	C5	39.496200	-84.747410
1451	Richmondian	C5	Whitewater		OH	Preble	Camden	C5	39.628910	-84.648690
1452	Richmondian	C5	Liberty		OH	Butler	Oxford	C5	39.506920	-84.745150
1453	Richmondian	C5	Waynesville		OH	Warren	Waynesville	C5	39.530620	-84.113420
1454	Richmondian	C5	Liberty		IN	Dearborn	Weisburg	C5	39.217960	-85.045940
1455	Richmondian	C5	Waynesville		OH	Hamilton	Mt. Airy	C5	39.191450	-84.570300
1456	Richmondian	C5	Whitewater		OH	Warren	Lebanon	C5	39.435220	-84.202900
1457	Richmondian	C5	Liberty		OH	Butler	Oxford	C5	39.506870	-84.745100
1458	Richmondian	C5	Waynesville		OH	Warren		C5	39.533333	-84.083333
1459	Richmondian	C5	Whitewater		IN	Wayne	Richmond	C5	39.759790	-84.907490
1460	Richmondian	C5	Whitewater		OH	Clinton	Clarksville	C5	39.388820	-83.846750
1461	Richmondian	C5	Liberty		OH	Butler	Oxford	C5	39.499650	-84.718883
1462	Richmondian	C5	Waynesville	Blanchester	OH	Clermont	Blanchester	C5	39.238170	-84.022960
1463	Richmondian	C5	Waynesville		OH	Butler	Oxford	C5	39.507271	-84.745682
1464	Richmondian	C5	Whitewater		OH	Clinton		C5	39.3894	-83.927
1465	Richmondian	C5	Whitewater	Lower	OH	Warren		C5	39.48027	-84.5712
1466	Richmondian	C5	Waynesville		OH	Butler		C5	39.35915	-84.36065
1467	Richmondian	C5	Waynesville		IN	Franklin		C5	39.43858	-85.0052
1468	Richmondian	C5	Waynesville		OH	Warren		C5	39.48459	-84.6354
1469	Richmondian	C5	Waynesville		OH	Warren		C5	39.48127	-84.6817
1470	Richmondian	C5	Waynesville	Fort Ancient	OH	Warren		C5	39.32828	-84.6783
1471	Richmondian	C5	Waynesville		IN	Franklin		C5	39.43694	-84.97806
1472	Richmondian	C5	Liberty		IN	Union		C5	39.48798	-84.94867
1473	Richmondian	C5	Liberty		IN	Jefferson		C5	38.77827	-85.36523
1474	Richmondian	C5	Waynesville	Fort Ancient	IN	Franklin		C5	39.3425	-84.95358
1475	Richmondian	C5	Bardstown		KY	Nelson		C5	37.76737	-85.35557
1476	Richmondian	C5	Waynesville		OH	Warren		C5	39.54853	-84.05233
1477	Richmondian	C5	Bull Fork		KY	Fleming		C5	38.40108	-83.72325
1478	Richmondian	C6	Elkhorn		OH	Preble	Morning Sun	C6	39.591870	-84.741360
1479	Richmondian	C6	Elkhorn		OH	Preble		C6	39.654130	-84.647670
1480	Richmondian	C6	Elkhorn		IN	Franklin	Hamburg	C6	39.379670	-85.250880
1481	Richmondian	C6	Elkhorn		IN	Wayne	Richmond	C6	39.863000	-84.792720

Appendix 1. Species distribution data

1425	
1426	
1427	Construction excavation on west side of southbound offramp from I-75 to Cincinnati-Dayton Road
1428	Exposure at spillway for Lake Reba, east of Richmond and just south of Kentucky State Route 52
1429	Hillside exposure and construction excavation behind Liberty Towne Centre on Cincinnati-Dayton Road, immediately south of intersection with Ohio State Route 129
1430	Hillside exposure behind Gold's Gym in Glenway Crossing Shopping Center on Glen Crossing Way, just west of intersection with Glenway Avenue
1431	Hillside exposure behind Stor-N-Lock at Liberty Pointe Shopping Area, on Cincinnati-Dayton Road, immediately south of intersection with Ohio State Route 129
1432	Hillside exposure behind Wal-Mart at Ohio State Route 177 and Washington Boulevard, 0.3 miles southeast of intersection of Ohio State Routes 130 and 177
1433	Hillside exposure behind Wal-Mart in Western Hills square on Ferguson Road
1434	Hillside exposure on north side of dam outlet from Caesar Creek Lake
1435	Multiple streamside exposures along unnamed stream that flows west of end of emergency spillway for Caesar Creek Lake and northward into Caesar Creek
1436	Multiple streamside exposures on Lick Run upstream and downstream of bridge for Ohio State Route 132
1437	Roadcut at intersection of Indiana State Route 101 and Brookville Dam Road
1438	Roadcut on both sides of Breiel Boulevard, 0.1 miles south of termination at Ohio State Route 73 in Middletown
1439	Roadcut on both sides of Kentucky State Route 11, 0.4 miles north of intersection with Kentucky State Route 324 at Weedonia
1440	Roadcut on east side of Kentucky State Route 11 at Fleming-Mason County Line.
1441	Roadcut on Indiana State Route 1, 1.6 miles to 2.1 miles south of intersection with US Route 52 at Cedar Grove
1442	Roadcut on south side of AA highway (Kentucky State Route 9), 3.6 miles east of intersection with Kentucky State Route 11 and 0.2 miles west of intersection with Kentucky State Route 1449
1443	Roadcuts on both sides of Bypass State Route 4, 0.3 miles south of intersection with Ohio State Route 4 and at overpass of Milliken Road
1444	Roadcuts on both sides of US Route 27, 0.5 miles south of Garrard-Lincoln county line.
1445	Small quarry on south bank of Flat Fork, just east of where Fry Road crosses creek, north of Ohio 32 and west of intersection with US Route 62 at Mount Orab, Ohio. Private property; permission required for entry.
1446	Streamside exposures on southeast side of Stonelick Creek, just southwest of spillway for Stonelick Lake
1447	4 mile creek, Oxford
1448	Beasley's Cr, Camden
1449	Big 4 RR cuts 14-15, Weisburg
1450	Bull Run Ck, near Oxford
1451	Camden
1452	Dodges Ck
1453	Dody's Highbank
1454	Harpers Branch, Flowing North
1455	Mt. Airy, Cincinnati
1456	North of Lebanon
1457	Oxford
1458	Roadcut along US Rt 42, west side of the road, 3 km northeast of Waynesville, Warren County, Ohio. Waynesville 7.5 min quadrangle, NE1/4 SE 1/4 sec. 26, R4, T4.
1459	Short Ck 3mi S of Richmond
1460	St. Rd crosses Cowans Ck
1461	Tallawanda Ck, College Corner
1462	Upper Stonelick Creek and Hunter's Creek, near Blanchester
1463	
1464	Cuts along sides of emergency spillway from Cowan Lake, immediately west of Ohio State Route 730
1465	Exposures along walls and floor of emergency spillway for Caesar Creek Lake
1466	Hillside exposure along pond on north side of development at northeast corner of intersection of Tylersville and Cox Roads in Westchester
1467	Hillside exposure flanking emergency spillway adjacent to dam of Brookville Lake
1468	Hillside exposure on north side of dam outlet from Caesar Creek Lake
1469	Multiple streamside exposures along unnamed stream that flows west of end of emergency spillway for Caesar Creek Lake and northward into Caesar Creek
1470	Multiple streamside exposures on Lick Run upstream and downstream of bridge for Ohio State Route 132
1471	Roadcut at intersection of Indiana State Route 101 and Brookville Dam Road
1472	Roadcut on both sides of Indiana State Route 101, 5.0 miles north of Brookville
1473	Roadcut on east side of US Route 421, 3.1 miles north of of intersection with Indiana State Route 56 in Madison
1474	Roadcut on Indiana State Route 1, 1.6 miles to 2.1 miles south of intersection with US Route 52 at Cedar Grove
1475	Roadcut on west side of US Route 150, 0.6 miles west of Nelson / Washington county line
1476	Roadcut on west side of US Route 42, 1.2 miles north of Main Street in Waynesville
1477	Three roadcuts on both sides Kentucky State Route 32, beginning 0.6 miles southeast of the intersection of with Kentucky State Route 11 on the south side of Flemingsburg and continuing for 0.6 miles to the southeast.
1478	1 Mi SE of Morning Sun
1479	Beasleys Cr.
1480	Cut along Rd. W of Hamburg
1481	East Fork, exp. Above Richmond

Appendix 1. Species distribution data

1482	Atrypida	Anazygidae	<i>Zygospira</i>	<i>modesta</i>	CiMNH	28560	
1483	Atrypida	Anazygidae	<i>Zygospira</i>	<i>modesta</i>	CiMNH	27530	
1484	Atrypida	Anazygidae	<i>Zygospira</i>	<i>modesta</i>	Holland and Patzkowsky 2007		72455
1485	Atrypida	Anazygidae	<i>Zygospira</i>	<i>modesta</i>	Field		IN-JE-0003
1486	Atrypida	Anazygidae	<i>Zygospira</i>	<i>modesta</i>	Field		IN-FR-0001
1487	Atrypida	Anazygidae	<i>Zygospira</i>	<i>modesta</i>	Field		OH-WA-0001
1488	Atrypida	Anazygidae	<i>Zygospira</i>	<i>modesta</i>	Field		IN-FR-0003
1489	Atrypida	Anazygidae	<i>Zygospira</i>	<i>modesta</i>	Field		
1490	Atrypida	Anazygidae	<i>Zygospira</i>	<i>modesta</i>	Field		IN-FR-0005

Appendix 1. Species distribution data

1482	Richmondian	C6	Elkhorn		OH	Montgomery	Centerville	C6	39.628360	-84.159320
1483	Richmondian	C6	Elkhorn		IN	Wayne	Richmond	C6	39.759790	-84.907490
1484	Richmondian	C6	Whitewater	Upper	IN	Wayne		C6	39.78728	-84.90183
1485	Maysvillian	C2	McMillan	Bellevue	IN	Jefferson	Madison	C2	38.749233	-85.376783
1486	Richmondian	C5	Waynesville		IN	Franklin	Brookville	C5	39.437950	-84.987400
1487	Richmondian	C5	Waynesville		OH	Warren		C5	39.477600	-84.063010
1488	Richmondian	C5	Liberty		IN	Franklin	Brookville	C5	39.480383	-84.948633
1489	Richmondian	C5	Waynesville		IN	Wayne	Richmond	C5	37.748466	-84.297716
1490	Richmondian	C5	Waynesville		IN	Franklin	Brookville	C5	39.341966	-84.953650

Appendix 1. Species distribution data

- 1482 Quarry, Centerville
- 1483 Short Ck, 2 mi S of Richmond
- 1484 Roadcuts on both sides of US Route 27, 0.8 miles north of intersection with Beelor Road
- 1485 Madison-421S
- 1486 Bon Well Hill
- 1487 Caesar Creek Spillway
- 1488 Garr Hill
- 1489 Richmond
- 1490 South Gate Hill

Appendix 2. Species area estimates normalized by the number of unique species occurrence localities incorporated in the range model.

Species	C1			C2			C3			C4			C5			C6		
	raw area	# points	normalized	raw area	# points	normalized	raw area	# points	normalized	raw area	# points	normalized	raw area	# points	normalized	raw area	# points	normalized
<i>Austinella scovellei</i>	--	--	--	--	--	--	--	--	--	--	--	123.49	3	41.16	--	--	--	
<i>Catazyga schuchertana</i>	--	--	--	--	--	--	--	--	--	--	--	5464.39	10	546.44	--	--	--	
<i>Dalmanella meeki</i>	--	--	--	--	--	--	2292.43	6	382.07	9038.20	16	564.89	14800.84	40	370.02	3.14	1	3.14
<i>Dalmanella multisepta</i>	3853.11	8	481.64	3814.99	4	953.75	--	--	--	--	--	--	--	--	--	--	--	
<i>Glyptorthis insculpta</i>	--	--	--	--	--	--	--	--	--	--	--	12521.13	49	255.53	425.14	3	141.71	
<i>Hebertella alveata</i>	--	--	--	--	--	--	--	--	--	--	--	131.71	5	26.34	1388.36	7	198.34	
<i>Hebertella occidentalis</i>	3297.12	6	549.52	12522.72	41	305.43	11520.71	22	523.67	11876.83	15	791.79	15218.16	60	253.64	2469.66	16	154.35
<i>Hebertella subjugata</i>	--	--	--	79.21	2	39.61	--	--	--	--	--	1197.84	4	299.46	3.14	1	3.14	
<i>Hiscobeccus capax</i>	--	--	--	--	--	--	--	--	--	--	--	16474.49	69	238.76	2663.68	15	177.58	
<i>Holtedahlinia sulcata</i>	--	--	--	--	--	--	--	--	--	--	--	12544.30	12	1045.36	61.13	2	30.57	
<i>Lepidocyclus perlamellosum</i>	--	--	--	--	--	--	--	--	--	--	--	3689.96	11	335.45	--	--	--	
<i>Leptaena gibbosa</i>	12.44	3	4.15	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
<i>Leptaena richmondensis</i>	--	--	--	--	--	--	--	--	--	1600.86	4	400.22	5478.57	23	238.20	60.43	3	20.14
<i>Plaesiomys subquadrata</i>	--	--	--	--	--	--	--	--	--	--	--	16629.65	50	332.59	955.43	5	191.09	
<i>Platystrophia acutilirata</i>	--	--	--	--	--	--	--	--	--	--	--	11406.07	41	278.20	1038.32	14	74.17	
<i>Platystrophia annieana</i>	--	--	--	--	--	--	--	--	--	--	--	6662.74	11	605.70	--	--	--	
<i>Platystrophia auburnensis</i>	--	--	--	--	--	--	11967.87	16	747.99	--	--	--	--	--	--	--	--	
<i>Platystrophia clarksvillensis</i>	--	--	--	--	--	--	--	--	--	9.22	2	4.61	10048.79	27	372.18	3.14	1	3.14
<i>Platystrophia corryvillensis</i>	--	--	--	--	--	--	3.14	1	3.14	--	--	--	--	--	--	--	--	
<i>Platystrophia crassa</i>	--	--	--	15.55	6	2.59	3.14	1	3.14	--	--	--	--	--	--	--	--	
<i>Platystrophia cummingsi</i>	--	--	--	--	--	--	--	--	--	--	--	155.75	5	31.15	--	--	--	
<i>Platystrophia cypha</i>	--	--	--	4706.10	7	672.30	498.84	5	99.77	5037.88	7	719.70	2672.83	15	178.19	3.14	1	3.14
<i>Platystrophia elkhornensis</i>	--	--	--	--	--	--	--	--	--	--	--	63.88	2	31.94	2580.10	7	368.59	
<i>Platystrophia forestei</i>	--	--	--	--	--	--	--	--	--	--	--	73.98	2	36.99	--	--	--	
<i>Platystrophia hopensis</i>	3.14	1	3.14	6242.97	12	520.25	3.14	1	3.14	--	--	--	--	--	--	--	--	
<i>Platystrophia laticosta</i>	--	--	--	9103.77	29	313.92	10179.77	19	535.78	3.14	1	3.14	1897.06	7	271.01	--	--	--
<i>Platystrophia moritura</i>	--	--	--	--	--	--	--	--	--	--	--	36.93	2	18.46	2985.89	13	229.68	
<i>Platystrophia morrowensis</i>	--	--	--	--	--	--	4.39	2	2.20	--	--	--	--	--	--	--	--	
<i>Platystrophia ponderosa</i>	3.14	1	3.14	15325.98	60	255.43	14391.90	65	221.41	15561.65	22	707.35	--	--	--	--	--	
<i>Platystrophia sublaticosta</i>	--	--	--	51.18	4	12.80	3.14	1	3.14	--	--	--	--	--	--	--	--	
<i>Plectorthis aequivalis</i>	--	--	--	69.16	2	34.58	3.14	1	3.14	--	--	--	--	--	--	--	--	
<i>Plectorthis fissicosta</i>	--	--	--	515.43	6	85.91	--	--	--	--	--	--	--	--	--	--	--	
<i>Plectorthis neglecta</i>	--	--	--	17.34	2	8.67	--	--	--	--	--	--	--	--	--	--	--	
<i>Plectorthis plicatella</i>	--	--	--	353.46	6	58.91	--	--	--	--	--	--	--	--	--	--	--	
<i>Rafinesquina alternata</i>	3941.69	1	3941.69	9814.65	20	490.73	12509.84	42	297.85	8590.29	24	357.93	16159.25	37	436.74	1906.47	4	476.62
<i>Retrorsirostra carleyi</i>	--	--	--	--	--	--	--	--	--	2703.02	11	245.73	2092.48	12	174.37	--	--	--
<i>Rhynchotrema denatum</i>	--	--	--	--	--	--	--	--	--	169.90	4	42.48	12956.01	24	539.83	933.58	12	77.80
<i>Sowerbyella rugosa</i>	3625.58	7	517.94	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
<i>Strophomena concordensis</i>	--	--	--	--	--	--	--	--	--	20.21	2	10.10	254.59	3	84.86	--	--	--
<i>Strophomena maysvillensis</i>	3.14	1	3.14	30.42	1	30.42	--	--	--	--	--	--	--	--	--	--	--	
<i>Strophomena nutans</i>	--	--	--	--	--	--	--	--	--	--	--	2736.76	10	273.68	--	--	--	
<i>Strophomena planoconvexa</i>	3.14	1	3.14	6078.76	10	607.88	--	--	--	--	--	--	--	--	--	--	--	
<i>Strophomena planumbona</i>	--	--	--	--	--	--	--	--	--	3.14	1	3.14	13873.07	24	578.04	3.14	1	3.14
<i>Strophomena sulcata</i>	--	--	--	--	--	--	--	--	--	--	--	2452.97	7	350.42	47.83	2	23.91	
<i>Strophomena vetusta</i>	--	--	--	--	--	--	--	--	--	--	--	6727.71	8	840.96	631.86	3	210.62	
<i>Tetraphalerella neglecta</i>	--	--	--	--	--	--	--	--	--	--	--	5384.29	10	538.43	--	--	--	
<i>Thaerodonta clarksvillensis</i>	--	--	--	--	--	--	--	--	--	--	--	7281.95	25	291.28	22.59	2	11.29	
<i>Zygospira cincinnatiensis</i>	55.37	2	27.69	112.85	5	22.57	--	--	--	--	--	--	--	--	--	--	--	
<i>Zygospira modesta</i>	4475.88	10	447.59	11319.79	19	595.78	10396.34	18	577.57	12730.94	29	439.00	14796.82	35	422.77	1240.48	7	177.21

Numer of unique localities/sequence
Percent of max localities per sequence

16
8.47

107
56.61

88.00
46.56

82
43.39

189
100.00

41
21.69

Appendix 3. Statistical comparison of geographic range size in taxonomic groups across all sequences calculated using the species area method normalized by the number of species occurrence points used to construct range models.

1. Geographic range of Maysvillian restricted versus carryover taxa

	Restricted	Carryover
N	27	34
Mean	155.0	479.0
Std. Dev.	276.0	649.0
SE Mean	53.0	111.0
T-value		-2.62
p-value		0.006

2. Maysvillian versus Richmondian range size of carryover taxa

	Maysvillian	Richmondian
N	17	17
Mean	601.0	356.0
Std. Dev.	880.0	251.0
SE Mean	213.0	61.0
T-value		1.10
p-value		0.857

3. Geographic range size of invader taxa versus carryover taxa in the Richmondian

	<i>Strophomena</i> native		<i>Strophomena</i> invasive	
	Carryover	Invader	Carryover	Invader
N	17	22	17	31
Mean	356.0	269.0	356.0	240.0
Std. Dev.	251.0	241.0	251.0	231.0
SE Mean	61.0	51.0	61.0	41.0
T-value		-1.10		-1.57
p-value		0.140		0.063

4. Geographic ranges of Maysvillian carryover taxa versus native descendant species

	<i>Strophomena</i> native		<i>Strophomena</i> invasive	
	Carryover	Descendants	Carryover	Descendants
N	17	24	17	15
Mean	356.0	170.0	356.0	170.0
Std. Dev.	251.0	186.0	251.0	185.0
SE Mean	61.0	38.0	61.0	48.0
T-value		-2.59		-2.41
p-value		0.008		0.011

Appendix 4. Statistical comparison of geographic range size in taxonomic groups by sequence calculated using the species area method normalized by the number of species occurrence points used to construct range models.

1. Sequence C1: Edenian

Source	DF	SS	MS	F-value	p-value
Factor	1	4709729	4709729	4.56	0.065
Error	8	8254920	1031865		
Total	9	12964649			

2. Sequence C2: early Maysvillian

Species: Area

Source	DF	SS	MS	F-value	p-value
Factor	1	231887	231887	2.99	0.103
Error	16	1242757	77672		
Total	17	77672	1474644		

3. Sequence C3: late Maysvillian

Species: Area

Source	DF	SS	MS	F-value	p-value
Factor	1	250378	250378	448	0.056
Error	12	670054	55838		
Total	13	920432			

4. Sequence C4: early Richmondian

***Strophomena* native**

***Strophomena* invasive**

Source	DF	SS	MS	F-value	p-value	DF	SS	MS	F-value	p-value
Factor	2	577131	288566	5.61	0.023	2	514539	258769	4.51	0.04
Error	10	514795	51480			10	574388	57439		
Total	12	1091927				12	1091927			

5. Sequence C5: middle Richmondian

***Strophomena* native**

***Strophomena* invasive**

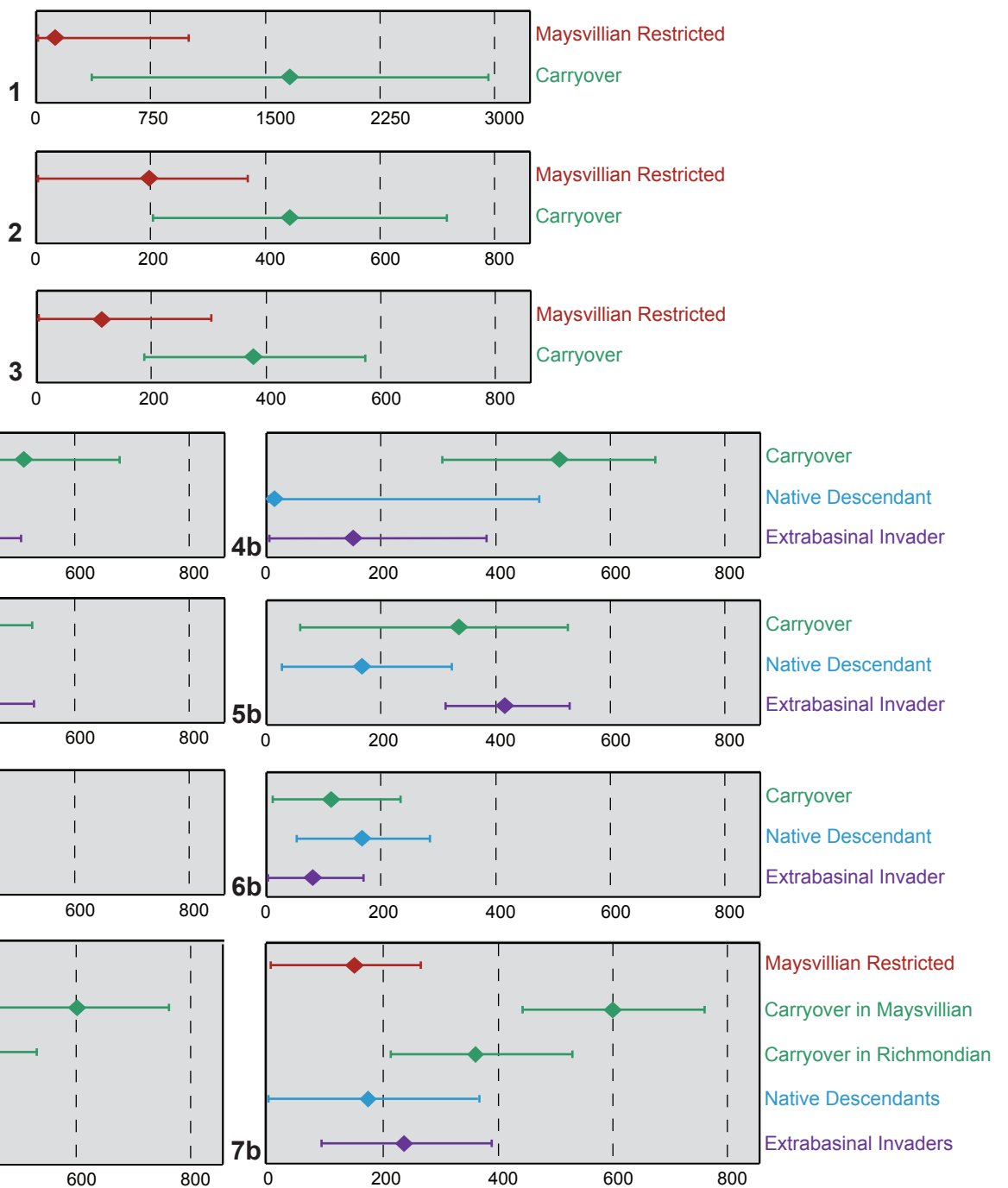
Source	DF	SS	MS	F-value	p-value	DF	SS	MS	F-value	p-value
Factor	2	75367	37683	0.65	0.528	2	340589	170295	3.5	0.043
Error	29	1675561	57778			29	1410338	48632		
Total	31	1750927				31	1750927			

6. Sequence C6: late Richmondian

***Strophomena* native**

***Strophomena* invasive**

Source	DF	SS	MS	F-value	p-value	DF	SS	MS	F-value	p-value
Factor	2	9439	4720	0.26	0.776	2	269169	13084	0.75	0.486
Error	18	330218	18345			18	313488	17416		
Total	20	339657				20	339657			



95% CI for Normalized Mean Geographic Range

Appendix 5. Comparison of mean species range (from area method normalized by number of unique localities) for each species group by sequence (1-6 relate to corresponding sequence number) and for the entire study interval, (7). 4-7 (a) treat Richmondian *Strophomena* species as native descendants, while (b) treat *Strophomena* species as invasive. Individual 95% CIs for mean based on pooled standard deviation.

Appendix 6. Statistical comparison of geographic range size in taxonomic groups across all sequences when Richmondian *Strophomena* species are treated as native descendants.

1. Geographic range of Maysvillian restricted versus carryover taxa

	Species: Area		Species: Linear		Genus: Area		Genus: Linear	
	Restricted	Carryover	Restricted	Carryover	Restricted	Carryover	Restricted	Carryover
N	25	18	25	18	4	17	4	17
Mean	12.3	52.8	39.9	80.5	17.8	57.6	37.8	78.9
Std. Dev.	23.1	30.2	67.5	25.3	30.2	27.9	46.5	31.3
SE Mean	4.6	7.1	13.0	6.0	15.0	6.8	23.0	7.6
T-value		-4.77		-2.76		-2.41		-1.68
p-value		<0.001		0.005		0.037		0.096

2. Maysvillian versus Richmondian range size of carryover taxa

	Species: Area		Species: Linear		Genus: Area		Genus: Linear	
	Maysvillian	Richmondian	Maysvillian	Richmondian	Maysvillian	Richmondian	Maysvillian	Richmondian
N	18	20	18	20	17	18	17	18
Mean	52.8	40.7	80.5	64.3	57.6	55.7	78.9	76.0
Std. Dev.	30.2	35.1	25.3	37.7	27.9	33.0	31.3	29.1
SE Mean	7.1	7.8	6.0	8.4	6.8	7.8	7.6	6.9
T-value		1.14		1.57		0.18		0.29
p-value		0.130		0.064		0.430		0.389

3. Geographic range size of invader taxa versus carryover taxa in the Richmondian

	Species: Area		Species: Linear		Genus: Area		Genus: Linear	
	Carryover	Invader	Carryover	Invader	Carryover	Invader	Carryover	Invader
N	20	22	20	22	18	29.4	18	22
Mean	40.7	29.4	64.3	62.2	55.7	30.2	76.0	62.2
Std. Dev.	35.1	30.2	37.7	25.4	33.0	6.4	29.1	25.4
SE Mean	7.8	6.4	8.4	5.4	7.8	2.6	6.9	5.4
T-value		1.12		0.21		2.61		1.57
p-value		0.136		0.441		0.006		0.063

4. Geographic ranges of Maysvillian carryover taxa versus native descendant species

	Species: Area		Species: Linear	
	Carryover	Descendants	Carryover	Descendants
N	20	24	20	24
Mean	40.7	17.0	64.3	42.8
Std. Dev.	35.1	22.8	37.7	31.7
SE Mean	7.8	4.7	8.4	6.5
T-value		2.60		2.03
p-value		0.007		0.025

Appendix 7. Statistical comparison of geographic range size in taxonomic groups by sequence when Richmondian *Strophomena* species are treated as native descendants.

1. Sequence C1: Edenian

Source	Species: Area					Species Linear					Genus: Area					Genus Linear				
	DF	SS	MS	F-value	p-value	DF	SS	MS	F-value	p-value	DF	SS	MS	F-value	p-value	DF	SS	MS	F-value	p-value
Factor	1	2605	260	52.45	0.152	1	4081	4081	1.93	0.209	1	268	268	0.20	0.673	1	460	460	0.16	0.706
Error	9	9553	1061			9	20048	2228			6	8169	1362			6	17592	2932		
Total	10	12158				10	24128				7	8438				7	18052			

2. Sequence C2: early Maysvillian

Source	Species: Area					Species Linear					Genus: Area					Genus Linear				
	DF	SS	MS	F-value	p-value	DF	SS	MS	F-value	p-value	DF	SS	MS	F-value	p-value	DF	SS	MS	F-value	p-value
Factor	1	9389	9389	71.06	0.001	1	1530	1530	0.30	0.591	1	2597	2597	3.48	0.121	1	718	718	4.66	0.083
Error	16	8804	550			16	81472	5092			5	3726	745			5	770	154		
Total	17	18194				17	83002				6	6323				6	1488			

3. Sequence C3: late Maysvillian

Source	Species: Area					Species Linear					Genus: Area					Genus Linear				
	DF	SS	MS	F-value	p-value	DF	SS	MS	F-value	p-value	DF	SS	MS	F-value	p-value	DF	SS	MS	F-value	p-value
Factor	1	5705	5705	9.31	0.019	1	17901	17901	22.11	0.001	1	3638	3638	15.21	0.018	1	6765	6765	109.00	<0.001
Error	12	9366	781			12	9717	810			4	957	239			4	248	62		
Total	13	15072				13	27613				5	4595				5	7012			

4. Sequence C4: early Richmondian

Source	Species: Area					Species Linear					Genus: Area					Genus Linear				
	DF	SS	MS	F-value	p-value	DF	SS	MS	F-value	p-value	DF	SS	MS	F-value	p-value	DF	SS	MS	F-value	p-value
Factor	2	7955	3978	6.71	0.014	2	12200	6100	7.39	0.011	1	4792	4792	6.50	0.038	1	1412	1412	3.85	0.100
Error	10	5926	593			10	8250	825			7	5159	737			7	2758	394		
Total	12	13881				12	20450				8	9951				8	4170			

5. Sequence C5: middle Richmondian

Source	Species: Area					Species Linear					Genus: Area					Genus Linear				
	DF	SS	MS	F-value	p-value	DF	SS	MS	F-value	p-value	DF	SS	MS	F-value	p-value	DF	SS	MS	F-value	p-value
Factor	2	5186	2593	2.59	0.092	2	2635	1318	1.86	0.174	1	6220	6220	9.36	0.007	1	1625	1625	4.73	0.045
Error	29	29018	1001			29	20579	710			16	10636	665			16	5499	344		
Total	31	34203				31	23214				17	16856				17	7123			

6. Sequence C6: late Richmondian

Source	Species: Area					Species Linear					Genus: Area					Genus Linear				
	DF	SS	MS	F-value	p-value	DF	SS	MS	F-value	p-value	DF	SS	MS	F-value	p-value	DF	SS	MS	F-value	p-value
Factor	2	70	35	0.20	0.820	2	520	260	0.42	0.664	1	682	682	2.98	0.112	1	45	45	0.09	0.771
Error	18	3121	173			18	11165	620			11	2514	229			11	5613	510		
Total	20	3191				20	11685				12	3196				12	5658			

Appendix 8. Statistical comparison of geographic range size in taxonomic groups across all sequences when Richmondian *Strophomena* species are treated as invasive.

1. Geographic range of Maysvillian restricted versus carryover taxa

	Species: Area		Species: Linear		Genus: Area		Genus: Linear	
	Restricted	Carryover	Restricted	Carryover	Restricted	Carryover	Restricted	Carryover
N	25	18	25	18	6	15	6	15
Mean	12.3	52.8	39.9	80.5	18.5	62.6	37.2	84.6
Std. Dev.	23.1	30.2	67.5	25.3	26.6	24.5	42.3	25.3
SE Mean	4.6	7.1	13.0	6.0	11.0	6.3	17.0	6.5
T-value		-4.77		-2.76		-3.50		-2.57
p-value		<0.001		0.005		0.004		0.021

2. Maysvillian versus Richmondian range size of carryover taxa

	Species: Area		Species: Linear		Genus: Area		Genus: Linear	
	Maysvillian	Richmondian	Maysvillian	Richmondian	Maysvillian	Richmondian	Maysvillian	Richmondian
N	18	20	18	20	15	15	15	15
Mean	52.8	40.7	80.5	64.3	62.6	60.2	84.6	79.9
Std. Dev.	30.2	35.1	25.3	37.7	24.5	29.7	25.3	28.2
SE Mean	7.1	7.8	6.0	8.4	6.3	7.7	6.5	7.3
T-value		1.14		1.57		0.24		0.48
p-value		0.130		0.064		0.408		0.316

3. Geographic range size of invader taxa versus carryover taxa in the Richmondian

	Species: Area		Species: Linear		Genus: Area		Genus: Linear	
	Carryover	Invader	Carryover	Invader	Carryover	Invader	Carryover	Invader
N	20	32	20	32	15	25	15	25
Mean	40.7	24.9	64.3	55.9	60.2	29.8	79.9	61.5
Std. Dev.	35.1	28.9	37.7	29.3	29.7	31.3	28.2	25.4
SE Mean	7.8	5.1	8.4	5.2	7.7	6.3	7.3	5.1
T-value		1.77		0.86		-3.07		-2.07
p-value		0.041		0.200		0.002		0.025

4. Geographic ranges of Maysvillian carryover taxa versus native descendant species

	Species: Area		Species: Linear	
	Carryover	Descendants	Carryover	Descendants
N	20	14	20	14
Mean	40.7	18.3	64.3	43.3
Std. Dev.	35.1	22.4	37.7	31.5
SE Mean	7.8	6.0	8.4	8.4
T-value		2.11		1.76
p-value		0.021		0.440

Appendix 9. Statistical comparison of geographic range size in taxonomic groups by sequence when Richmondian *Strophomena* species are treated as invasive.

1. Sequence C1: Edenian

Source	Species: Area					Species Linear					Genus: Area					Genus Linear				
	DF	SS	MS	F-value	p-value	DF	SS	MS	F-value	p-value	DF	SS	MS	F-value	p-value	DF	SS	MS	F-value	p-value
Factor	1	2605	260	52.45	0.152	1	4081	4081	1.93	0.209	1	2017	217	1.89	0.219	1	4097	4097	1.76	0.233
Error	9	9553	1061			9	20048	2228			6	642	170			6	13955	2326		
Total	10	12158				10	24128				7	8438				7	18052			

2. Sequence C2: early Maysvillian

Source	Species: Area					Species Linear					Genus: Area					Genus Linear				
	DF	SS	MS	F-value	p-value	DF	SS	MS	F-value	p-value	DF	SS	MS	F-value	p-value	DF	SS	MS	F-value	p-value
Factor	1	9389	9389	71.06	0.001	1	1530	1530	0.30	0.591	1	2737	2737	3.82	0.108	1	672	672	4.11	0.098
Error	16	8804	550			16	81472	5092			5	3586	717			5	817	163		
Total	17	18194				17	83002				6	6323				6	1488			

3. Sequence C3: late Maysvillian

Source	Species: Area					Species Linear					Genus: Area					Genus Linear				
	DF	SS	MS	F-value	p-value	DF	SS	MS	F-value	p-value	DF	SS	MS	F-value	p-value	DF	SS	MS	F-value	p-value
Factor	1	5705	5705	9.31	0.019	1	17901	17901	22.11	0.001	1	3638	3638	15.21	0.018	1	6765	6765	109.00	<0.001
Error	12	9366	781			12	9717	810			4	957	239			4	248	62		
Total	13	15072				13	27613				5	4595				5	7012			

4. Sequence C4: early Richmondian

Source	Species: Area					Species Linear					Genus: Area					Genus Linear				
	DF	SS	MS	F-value	p-value	DF	SS	MS	F-value	p-value	DF	SS	MS	F-value	p-value	DF	SS	MS	F-value	p-value
Factor	2	7861	3931	6.53	0.015	2	8543	4272	3.59	0.067	1	8614	8614	45.09	<0.001	1	3584	3584	42.79	<0.001
Error	10	602	62			10	11907	1191			7	1337	191			7	586	84		
Total	12	13881				12	20450				8	9951				8	4170			

5. Sequence C5: middle Richmondian

Source	Species: Area					Species Linear					Genus: Area					Genus Linear				
	DF	SS	MS	F-value	p-value	DF	SS	MS	F-value	p-value	DF	SS	MS	F-value	p-value	DF	SS	MS	F-value	p-value
Factor	2	4348	2174	2.11	0.139	2	354	177	2.61	0.091	1	4697	4697	6.18	0.024	1	1384	1384	3.86	0.067
Error	29	29855	129			29	19675	678			16	1216	760			16	5740	359		
Total	31	34203				31	23214				17	16856				17	7123			

6. Sequence C6: late Richmondian

Source	Species: Area					Species Linear					Genus: Area					Genus Linear				
	DF	SS	MS	F-value	p-value	DF	SS	MS	F-value	p-value	DF	SS	MS	F-value	p-value	DF	SS	MS	F-value	p-value
Factor	2	517	259	1.74	0.204	2	378	189	0.3	0.744	1	845	845	3.95	0.072	1	132	132	0.26	0.619
Error	18	2674	149			18	11307	628			11	2350	214			11	5527	502		
Total	20	3191				20	11685				12	3196				12	5658			