

2010

Crayfish Distribution Project



Connecticut Department of Energy &
Environmental Protection
Bureau of Water Protection and Land Reuse

Work Summary Document

Crayfish Distribution Project

-2010-

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Purpose: The purpose of this document is to provide a summary crayfish species occurrence as noted while conducting ambient fish community data collection in wadeable streams and rivers during the 2010 index period (June-September).

Synopsis: Concurrent with ambient fish community data collection crayfish, when present, was identified by Connecticut Department of Energy and Environmental Protection (DEEP) Bureau of Water Protection and Land Reuse (WPLR) staff (using internal key modified from existing key(s) by Inland Fisheries). The intent of the data is to augment species distribution records as well as obtain specimens for mercury analysis (probabilistic sites only).

Crayfish specimens were present and 93 locations sampled during June–September 2010. Targeted sites were concentrated in the southeastern Connecticut (lower Thames major basin and south eastern coastal complex) with others were located statewide to support probabilistic monitoring and special projects such as cold water stream temperature regimes and periphyton for nutrient criteria development. This type of species occurrence data has been collected by WPLR staff since 2006. To date crayfish species have been documented at 270 locations (Figure 1).

Species collected during the 2010 season included *Orconectes limosus* (60% of sites), *Cambarus robustus* (34% of sites), *Orconectes virilis* (29% of sites), *Procambarus acutus* (10% of sites), and *Orconectes rusticus* (3% of sites) (Figure 2). Neither *Procambarus clarkii* nor *Cambarus bartonii* were observed by WPLR staff while Electrofishing (Figures 3 thru 7).

Species co-occurring: Twenty-five (25) site locations had more than 1 species present; 20 had 2 and 5 had 3 (Table 2).

***Cambarus bartonii*:** This species has not been collected by WPLR fish survey crews to date. However, it has been collected by WPLR macroinvertebrate survey crews at 11 sites statewide (Indian Meadow Brook-Winchester, Stickney Hill Brook-Union, Pomperaug River and Wood Creek- Woodbury, Steele Brook-Watertown, Pequabuck River-Bristol, Stony Brook-Kent, Eagleville Brook-Mansfield, and Umpawaug Pond Brook-Redding). In addition anecdotal information suggests populations exist in many small streams in northwestern, CT. The lack of documentation in WPLR fish samples could be related to:

- *C. bartonii* are not as susceptible to capture by electrofishing as macroinvertebrate sampling methods.

- Streams with *C. bartonii* have not been electrofished by WPLR staff or were sampled prior to 2006 and therefore crayfish species were not being co-collected.
- *C. bartonii* are mis-identified as *C. robustus* (large bartonii are roughly equal to medium sized robustus and as such may “blend in” when robustus are abundant).
- *C. bartonii* are not a very abundant at any particular site and may be easily missed or not netted while co-collecting fish.
- *C. bartonii* are not very common in CT streams.
- WPLR fish community sites are not preferred habitat for *C. bartonii*

Mercury: An analysis of mercury concentration in crayfish tissue tail meat will be forthcoming with the receipt of the 2010 sample data.

Future work: It is the intent to continue to collect crayfish species occurrence data concurrent with ambient fish community work into the future. Additional effort will emphasize collection of small to mid-sized crayfish and continued close examination of netted specimens to differentiate *C. robustus* from *C. bartonii*.

Exploratory data analysis will occur with by combining crayfish records collected as part of WPLR fish community and WPLR benthic macroinvertebrate collections to see if species distributions are influenced by human and natural variables such as watershed size, impervious cover, stream temperature, etc.

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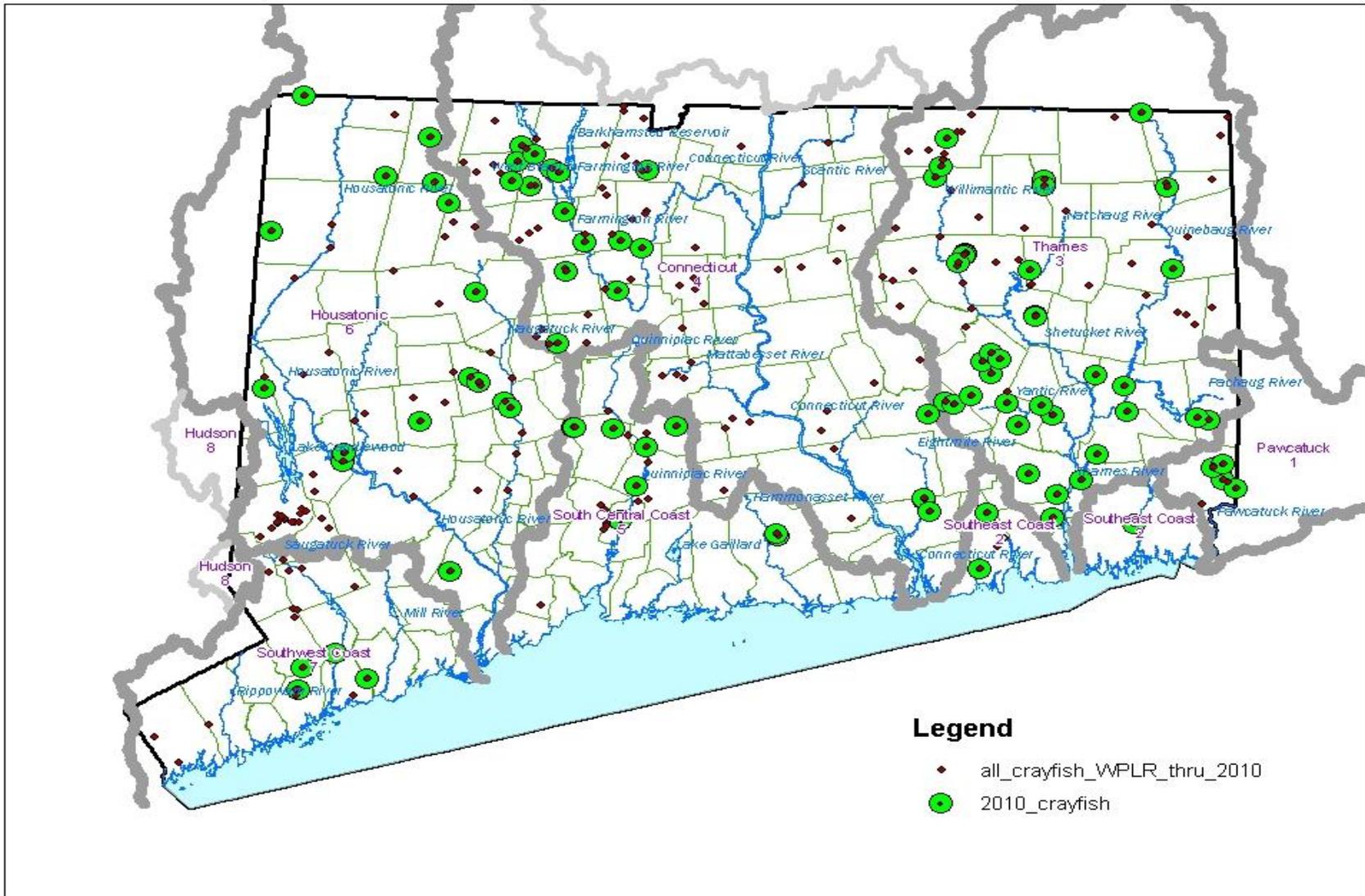


Figure 1. The 93 locations where at least 1 crayfish species was collected in 2010 (large green circles). Since 2006 WPLR has collected crayfish species at 270 sites (small red circles) while simultaneously collecting ambient fish community data.

sites present 2010 work plan
N= 93

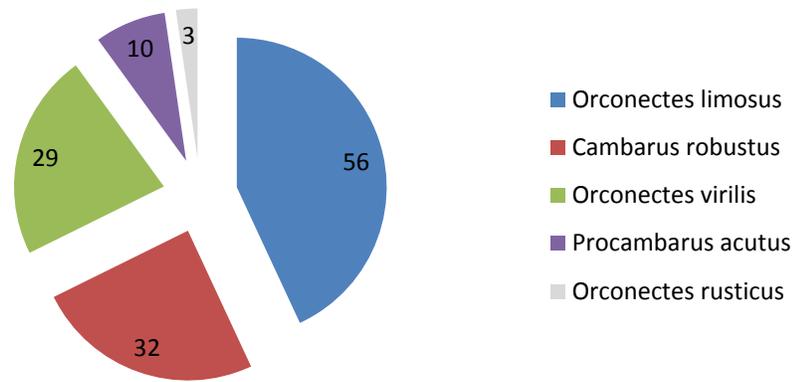


Figure 2: The percent of site locations each species was present during the 2010 sampling season. Note: sites with crayfish absent are not included in the N=93.

Table 1. Location of crayfish species collected with ambient fish community samples for WPLR 2010. Records are sorted by Genus species ID, stream name and then basin id.

Trip date	Station ID	Sample ID	Genus species	Stream	proximity	landmark	Municipality	basin	YLat	XLong
7/22/2010	6161	21438	Cambarus robustus	Bartlett Brook	upstream	Taylor bridge road	Lebanon	3902	41.5883	-72.2563
6/17/2010	6125	20632	Cambarus robustus	Beebe Brook	at	Westwood road #1	Sharon		41.8406	-73.4807
7/6/2010	6143	21191	Cambarus robustus	Billings Avery Brook	US	Route 12 Crossing	Ledyard	3000	41.4589	-72.0643
7/21/2010	1456	21322	Cambarus robustus	Bone Mill Brook	upstream	end of drivable road above sweet heart lake	Tolland	3100	41.9250	-72.3162
6/1/2010	2532	20256	Cambarus robustus	Branch Brook	adjacent	Kozy Corner Road upstream of mouth 3/4 mile	Eastford	3203	41.9199	-72.1256
6/1/2010	2291	20255	Cambarus robustus	Branch Brook	Upstream Westford Road	at mouth	Eastford	3203-10	41.9108	-72.1245
6/17/2010	2342	20630	Cambarus robustus	Brown Brook	at	Route 63	Canaan	6201	41.9267	-73.2799
6/1/2010	1225	20251	Cambarus robustus	Eagleville Brook	Upstream side	#43 Hunting Lodge Road (private driveway)	Mansfield	3100-19	41.8067	-72.2646
6/1/2010	1226	20252	Cambarus robustus	Eagleville Brook	upstream	Separatist Road	Mansfield	3100-19	41.8040	-72.2660
6/1/2010	1228	20254	Cambarus robustus	Eagleville Brook	Upstream	NNT to Eagleville Brook Adj. To N. Eagleville Road	Mansfield	3100-19	41.7938	-72.2752
6/1/2010	1230	20253	Cambarus robustus	Eagleville Brook	Downstream	NNT to Eagleville Brook Adj. To N. Eagleville Road	Mansfield	3100-19	41.7932	-72.2756
6/1/2010	1697	20250	Cambarus robustus	Eagleville Brook	north side	N Eagleville Rd adjacent F-lot	Mansfield	3100-19	41.8089	-72.2633
7/21/2010	89	21321	Cambarus robustus	Furnace Brook	upstream	Orcuttville Road	Stafford	3103	41.9841	-72.2947
6/10/2010	2311	20438	Cambarus robustus	Hall Meadow Brook	at	park access road bridge	Torrington	6901	41.8861	-73.1689
6/10/2010	2394	20439	Cambarus robustus	Hall Meadow Brook	adjacent to Rte 272	across from South Norfolk lumber company	Norfolk	6901	41.9173	-73.1949
7/30/2010	1012	21612	Cambarus robustus	Means Brook		DS Sawmill City Rd.	Shelton	6024	41.3191	-73.1618
7/22/2010	6162	21439	Cambarus robustus	Pease Brook	upstream	Goshen Hill road and Smith Road intersection	Lebanon	3905	41.6231	-72.2205
7/22/2010	6163	21440	Cambarus robustus	Pease Brook	upstream	Mack Road	Lebanon	3905	41.6418	-72.2349
6/14/2010	2660	20498	Cambarus robustus	Pequabuck River		just upstream small Trib upstream of Barlow and Old Terryville Rd	Bristol	4315	41.6708	-72.9774

6/29/2010	278	20873	Cambarus robustus	Pomperaug River	upstream	Judson Avenue	Woodbury	6800	41.5491	-73.2165
6/9/2010	317	20386	Cambarus robustus	Sandy Brook	opposite	Grange Hall off Riverton Road	Colebrook	4304	41.9740	-73.0406
6/2/2010	6147	20314	Cambarus robustus	Sherman Brook	at	Harbor Road	Colchester	3903	41.5792	-72.3000
6/29/2010	972	20876	Cambarus robustus	Spruce Brook	upstream	confluence with Jefferson Hill Brook	Litchfield	6906	41.7481	-73.1194
9/10/2010	2407	22344	Cambarus robustus	Steele Brook	at	West Road	Watertown	6912	41.6175	-73.1310
7/20/2010	2331	21313	Cambarus robustus	Stonehouse Brook	off old trail	downstream Palmer Road	Chaplin	3204	41.7812	-72.1509
7/1/2010	626	21186	Cambarus robustus	Susquetonscut Brook	adjacent	route 32 upstream of route 87	Franklin	3907	41.5724	-72.1324
6/7/2010	1746	20369	Cambarus robustus	West Branch Farmington River	behind	at Upcountry Sports	New Hartford	4300	41.8732	-72.9648
6/16/2010	359	20594	Cambarus robustus	West Branch Salmon Brook	upstream 50 meters	Barndoor Road	Granby	4319	41.9372	-72.8215
6/21/2010	5748	20658	Cambarus robustus	WEWAKA BROOK		Parallel to Rte 133 1.4 miles DS Wewaka Rd	Bridgewater	6000	41.4878	-73.3508
6/21/2010	6129	20659	Cambarus robustus	Wewaka Brook	at	2nd Wewaka Brook Road crossing up from route 133 just above Beach Hill Road	Bridgewater	6000	41.5010	-73.3497
7/21/2010	458	21320	Cambarus robustus	Willimantic River	downstream	Stafford POTW	Willington	3100	41.9423	-72.3058
7/1/2010	621	21183	Cambarus robustus	Yantic River	upstream	Stanton Road	Bozrah	3900	41.5766	-72.1918
7/16/2010	650	21303	Orconectes limosus	Ashaway River	at	State line on route 184	North Stonington	1002	41.4433	-71.7963
7/20/2010	5043	21311	Orconectes limosus	Ballymahack Brook		US of old diversion dam at manfrede property	Windham	3801	41.7125	-72.1426
6/3/2010	2656	20316	Orconectes limosus	Beaver Brook		at Charles Pack trail crossing	Barkhamsted	4308	41.9379	-72.9888
7/15/2010	1236	21233	Orconectes limosus	Beaver Brook	Downstream	bridge at 55-123 Beaver Brook Road	Lyme	4803	41.4100	-72.3289
6/3/2010	2726	20317	Orconectes limosus	Beaver Brook	adjacent to park road	downstream of crossing	Barkhamsted	4308-15-2-R2	41.9321	-72.9754
7/29/2010	6173	21554	Orconectes limosus	Bride Brook	at	unknown to be determined	East Lyme	2206	41.3222	-72.2423
7/16/2010	479	21301	Orconectes limosus	Broad Brook	downstream	Old Jewitt City Road	Preston	3716	41.5632	-71.9834
6/14/2010	2711	20497	Orconectes limosus	Bunnell Brook	upstream diversion for swimming area	at recreation area at vineyard rd and clear brook rd	Burlington	4311-00-2-R2	41.7807	-72.9630
6/2/2010	6137	20311	Orconectes limosus	Cabin Brook	1000 meters	upstream of Cabin Road enter from Kennedy Drive trail	Colchester	4703	41.5603	-72.3309
6/4/2010	1998	20363	Orconectes limosus	Chatfield Hollow Brook	at	covered bridge in state park	Killingworth	5105	41.3742	-72.5930

7/20/2010	6170	21312	Orconectes limosus	Chestnut Hill Brook	upstream of Lake Marie	on Joshua Trust Property	Windham	3801-02	41.7100	-72.1424
7/16/2010	5153	21310	Orconectes limosus	Cranberry Meadow Brook		50 M DS of rte 161	East Lyme	2202	41.4081	-72.2289
7/15/2010	49	21232	Orconectes limosus	East Branch Eightmile River	100 meters upstream	Mouth downstream Route 156	Lyme	4802	41.4309	-72.3375
7/15/2010	930	21231	Orconectes limosus	Eightmile River	150 meters downstream	Confluence with East branch Eightmile R. (rte 156)	Lyme	4800	41.4300	-72.3392
6/7/2010	72	20367	Orconectes limosus	FARMINGTON RIVER	adjacent	Route 4 at Apricots Restaurant	Farmington	4300	41.7508	-72.8717
7/19/2010	72	21304	Orconectes limosus	FARMINGTON RIVER	adjacent	Route 4 at Apricots Restaurant	Farmington	4300	41.7508	-72.8717
6/7/2010	741	20368	Orconectes limosus	FARMINGTON RIVER	100 meters upstream	Steele bridge on Town Bridge Road	Canton	4300	41.8257	-72.9295
7/19/2010	741	21305	Orconectes limosus	FARMINGTON RIVER	100 meters upstream	Steele bridge on Town Bridge Road	Canton	4300	41.8257	-72.9295
7/21/2010	89	21321	Orconectes limosus	Furnace Brook	upstream	Orcuttville Road	Stafford	3103	41.9841	-72.2947
7/1/2010	625	21185	Orconectes limosus	Gardner Brook	downstream	Bear Hill Road near Bishop Road intersection	Bozrah	3906	41.5433	-72.1734
7/6/2010	619	21187	Orconectes limosus	Hewitt Brook (Poquetanuck Brook)	upstream	Schoolhouse Rd.	Preston	3003	41.4981	-72.0365
7/28/2010	1107	21548	Orconectes limosus	Honeypot Brook	downstream	Blacks Road	Cheshire	5200	41.5396	-72.8789
7/6/2010	1194	21188	Orconectes limosus	Hunts Brook		US Old Norwich Rd	Waterford	3006	41.4001	-72.1153
6/16/2010	1713	20593	Orconectes limosus	Mallory Brook	downstream	Route 44 Crossing near mouth	Barkhamsted	4305	41.9113	-73.0263
7/30/2010	1012	21612	Orconectes limosus	Means Brook		DS Sawmill City Rd.	Shelton	6024	41.3191	-73.1618
7/16/2010	475	21300	Orconectes limosus	Myron Kinney Brook	adjacent	Myron Kinney Road	Voluntown	3604	41.5533	-71.8619
6/11/2010	1243	20493	Orconectes limosus	Nod Brook	DS	Route 10	Avon	4317	41.8158	-72.8294
6/11/2010	2682	20494	Orconectes limosus	Nod Brook	at	Mountain Road Crossing	Simsbury	4317	41.8286	-72.8667
6/23/2010	236	20769	Orconectes limosus	Norwalk River	upstream	Perry Avenue	Norwalk	7300	41.1359	-73.4260
6/23/2010	2687	20768	Orconectes limosus	Norwalk River	at # 77 Norwalk Road (Route 7)	at ASML lithographic company	Wilton	7300	41.1703	-73.4172
7/23/2010	5492	21443	Orconectes limosus	Old Stone Mill Brook		US of potash hill rd	Lisbon	3805	41.6200	-72.0383
7/7/2010	610	21194	Orconectes limosus	Oxoboxo Brook	upstream 100 meters	Meeting House Lane	Montville	3004	41.4673	-72.1570

7/6/2010	620	21189	Orconectes limosus	Oxoboxo Brook	upstream crossing	at Faria Company (pink row road)	Montville	3004	41.4366	-72.1062
6/30/2010	1748	20929	Orconectes limosus	PENDLETON HILL BROOK	Upstream Grindstone Hill Road	PENDLETON HILL BROOK NEAR CLARKS FALLS	North Stonington	1001-02	41.4748	-71.8342
6/14/2010	2660	20498	Orconectes limosus	Pequabuck River		just upstream small Trib upstream of Barlow and Old Terryville Rd	Bristol	4315	41.6708	-72.9774
6/29/2010	278	20873	Orconectes limosus	Pomperaug River	upstream	Judson Avenue	Woodbury	6800	41.5491	-73.2165
6/4/2010	1853	20365	Orconectes limosus	Pond Meadow Brook	upstream confluence with Chatfield Hollow Brook	at hiking trail crossing	Killingworth	5105-01_01	41.3777	-72.5946
7/14/2010	285	21198	Orconectes limosus	Quinebaug River	upstream	Route 197	Thompson	3700	42.0220	-71.9528
6/8/2010	476	20383	Orconectes limosus	Quinebaug River	downstream	Route 12 and upstream Patchaug River Confluence	Griswold	3700	41.6022	-71.9868
7/13/2010	476	21195	Orconectes limosus	Quinebaug River	downstream	Route 12 and upstream Patchaug River Confluence	Griswold	3700	41.6022	-71.9868
6/18/2010	492	20655	Orconectes limosus	Quinebaug River	adjacent	Park at Kennedy Drive	Putnam	3700	41.9081	-71.9096
7/13/2010	492	21197	Orconectes limosus	Quinebaug River	adjacent	Park at Kennedy Drive	Putnam	3700	41.9081	-71.9096
7/13/2010	2645	21196	Orconectes limosus	Quinebaug River	at end of	Edwardson Street	Killingly	3700	41.7809	-71.9010
8/30/2010	289	22114	Orconectes limosus	Quinnipiac River	adjacent	Route 15 USGS gauge	Wallingford	5200	41.4501	-72.8407
8/30/2010	2396	22113	Orconectes limosus	Quinnipiac River	behind rest stop	at Quinnipiac River Canoe trail access	Wallingford	5200	41.3981	-72.8681
8/30/2010	6128	22112	Orconectes limosus	Quinnipiac River	between	Meriden landfill and St. Laurent's Cemetery	Meriden	5200	41.5114	-72.8233
7/26/2010	5561	21465	Orconectes limosus	Red Brook		US of wells rd	Groton	2105	41.3908	-71.9730
7/30/2010	554	21613	Orconectes limosus	Sasco Brook	Downstream	Hulls Farm Road	Westport	7109	41.1528	-73.3060
8/27/2010	1294	22209	Orconectes limosus	Saugatuck River	at	Keene Park Parking Lot	Weston	7200	41.1927	-73.3617
9/10/2010	329	22346	Orconectes limosus	Steele Brook	downstream	East Aurora Street	Waterbury	6912	41.5711	-73.0594
9/10/2010	331	22347	Orconectes limosus	Steele Brook	parallel	North Parking Lot for Municipal stadium	Waterbury	6912	41.5805	-73.0703
9/10/2010	697	22345	Orconectes limosus	Steele Brook	upstream	Route 6 (Culter Street)	Watertown	6912	41.6105	-73.1153
6/7/2010	1746	20369	Orconectes limosus	West Branch Farmington River	behind	at Upcountry Sports	New Hartford	4300	41.8732	-72.9648
7/19/2010	1746	21306	Orconectes limosus	West Branch Farmington River	behind	at Upcountry Sports	New Hartford	4300	41.8732	-72.9648

6/16/2010	359	20594	Orconectes limosus	West Branch Salmon Brook	upstream 50 meters	Barndoor Road	Granby	4319	41.9372	-72.8215
7/21/2010	458	21320	Orconectes limosus	Willimantic River	downstream	Stafford POTW	Willington	3100	41.9423	-72.3058
6/30/2010	605	20927	Orconectes limosus	Wyassup Brook	at mouth	upstream of Clarks Falls Road	North Stonington	1001	41.4566	-71.8172
7/1/2010	621	21183	Orconectes limosus	Yantic River	upstream	Stanton Road	Bozrah	3900	41.5766	-72.1918
6/21/2010	2671	20657	Orconectes rusticus	Naromiyocknowhu sunkatankshunk Brook (FKA Morrissey)	at footbridge	in Brookland Preserve at end of Crooked Furrows Lane	Sherman	6017	41.5996	-73.4900
6/10/2010	6126	20440	Orconectes rusticus	Norfolk Brook	at	Yale School Music DS Mountain Road	Norfolk	6100-03	41.9873	-73.2016
9/10/2010	329	22346	Orconectes rusticus	Steele Brook	downstream	East Aurora Street	Waterbury	6912	41.5711	-73.0594
7/22/2010	6161	21438	Orconectes virilis	Bartlett Brook	upstream	Taylor bridge road	Lebanon	3902	41.5883	-72.2563
6/14/2010	2711	20497	Orconectes virilis	Bunnell Brook	upstream diversion for swimming area	at recreation area at vineyard rd and clear brook rd	Burlington	4311-00-2-R2	41.7807	-72.9630
7/28/2010	5910	21545	Orconectes virilis	Cuff Brook	0.1 miles downstream	Route 84 Crossing	Cheshire	5202	41.5409	-72.9485
7/28/2010	6176	21546	Orconectes virilis	Cuff Brook	upstream	Hickory Lane to dam	Cheshire	5202	41.5404	-72.9464
6/1/2010	1225	20251	Orconectes virilis	Eagleville Brook	Upstream side	#43 Hunting Lodge Road (private driveway)	Mansfield	3100-19	41.8067	-72.2646
6/1/2010	1226	20252	Orconectes virilis	Eagleville Brook	upstream	Separatist Road	Mansfield	3100-19	41.8040	-72.2660
6/1/2010	1230	20253	Orconectes virilis	Eagleville Brook	Downstream	NNT to Eagleville Brook Adj. To N. Eagleville Road	Mansfield	3100-19	41.7932	-72.2756
7/21/2010	89	21321	Orconectes virilis	Furnace Brook	upstream	Orcuttville Road	Stafford	3103	41.9841	-72.2947
7/1/2010	625	21185	Orconectes virilis	Gardner Brook	downstream	Bear Hill Road near Bishop Road intersection	Bozrah	3906	41.5433	-72.1734
6/9/2010	158	20384	Orconectes virilis	Mad River	between	Mouth and Old Route 8 crossing	Winchester	4302	41.9199	-73.0597
7/22/2010	6163	21440	Orconectes virilis	Pease Brook	upstream	Mack Road	Lebanon	3905	41.6418	-72.2349
6/14/2010	2660	20498	Orconectes virilis	Pequabuck River		just upstream small Trib upstream of Barlow and Old Terryville Rd	Bristol	4315	41.6708	-72.9774
6/18/2010	285	20654	Orconectes virilis	Quinebaug River	upstream	Route 197	Thompson	3700	42.0220	-71.9528
7/14/2010	285	21198	Orconectes virilis	Quinebaug River	upstream	Route 197	Thompson	3700	42.0220	-71.9528
6/18/2010	492	20655	Orconectes virilis	Quinebaug River	adjacent	Park at Kennedy Drive	Putnam	3700	41.9081	-71.9096
6/17/2010	1440	20631	Orconectes virilis	Sages Ravine Brook	downstream	Route 41	Salisbury	6001	42.0497	-73.4245

6/9/2010	1796	20387	Orconectes virilis	Sandy Brook	upstream	Route 20	Barkhamsted	4304	41.9600	-73.0200
6/2/2010	623	20313	Orconectes virilis	Sherman Brook	upstream	Norwich Ave.	Colchester	3903	41.5753	-72.2847
6/9/2010	599	20385	Orconectes virilis	Still River	300 meters downstream	VFW lodge on Route 8 (site 39) upstream industrial building	Winchester	4303	41.9503	-73.0490
7/1/2010	626	21186	Orconectes virilis	Susquetonscut Brook	adjacent	route 32 upstream of route 87	Franklin	3907	41.5724	-72.1324
7/23/2010	5657	21444	Orconectes virilis	Susquetonscut Brook		US of rte 207	Lebanon	3907	41.6439	-72.2042
7/22/2010	6164	21441	Orconectes virilis	Susquetonscut Brook	upstream	Chappell Road	Lebanon	3907	41.6540	-72.2196
6/16/2010	359	20594	Orconectes virilis	West Branch Salmon Brook	upstream 50 meters	Barndoor Road	Granby	4319	41.9372	-72.8215
7/21/2010	458	21320	Orconectes virilis	Willimantic River	downstream	Stafford POTW	Willington	3100	41.9423	-72.3058
7/28/2010	2666	21544	Orconectes virilis	Willow Brook	downstream side	behind # 208 Baldwin Ave	Meriden	5206	41.5425	-72.7707
7/1/2010	621	21183	Orconectes virilis	Yantic River	upstream	Stanton Road	Bozrah	3900	41.5766	-72.1918
7/1/2010	622	21184	Orconectes virilis	Yantic River	upstream	West Town Street adjacent to Connecticut Avenue	Norwich	3900	41.5583	-72.1120
7/16/2010	650	21303	Procambarus acutus	Ashaway River	at	State line on route 184	North Stonington	1002	41.4433	-71.7963
6/1/2010	2291	20255	Procambarus acutus	Branch Brook	Upstream Westford Road	at mouth	Eastford	3203-10	41.9108	-72.1245
6/30/2010	5168	20930	Procambarus acutus	Denison Brook		US of Fish rd which intersects with 49 across from Hodge rd	Voluntown	3603	41.5486	-71.8422
6/30/2010	606	20928	Procambarus acutus	Green Fall River	upstream	confluence with Wyassup Bk US Clarks Fall Rd.	North Stonington	1002	41.4568	-71.8169
7/9/2010	2634	21127	Procambarus acutus	Green Fall River	behind	#225 Denison Hill Road (Tillinghouse Residence)	North Stonington	1002	41.4816	-71.8159
7/16/2010	475	21300	Procambarus acutus	Myron Kinney Brook	adjacent	Myron Kinney Road	Voluntown	3604	41.5533	-71.8619
6/30/2010	1748	20929	Procambarus acutus	PENDLETON HILL BROOK	Upstream Grindstone Hill Road	PENDLETON HILL BROOK NEAR CLARKS FALLS	North Stonington	1001-02	41.4748	-71.8342
6/8/2010	476	20383	Procambarus acutus	Quinebaug River	downstream	Route 12 and upstream Patchaug River Confluence	Griswold	3700	41.6022	-71.9868
7/26/2010	5561	21465	Procambarus acutus	Red Brook		US of wells rd	Groton	2105	41.3908	-71.9730

Table 2. Co-Occurrence of species: 2010 sites where more than 1 species was present during ambient fish community sampling.

stream name	Basin	station ID	proximity	landmark	town	<i>Cambarus robustus</i>	<i>Orconectes limosus</i>	<i>Orconectes rusticus</i>	<i>Orconectes virilis</i>	<i>Procambarus acutus</i>
Ashaway River	1002	650	at	State line on route 184	North Stonington		X			X
Bartlett Brook	3902	6161	upstream	Taylor bridge road	Lebanon	X			X	
Branch Brook	3203	2291	Upstream Westford Road	at mouth	Eastford	X				X
Bunnell Brook	4311	2711	upstream diversion for swimming area	at recreation area at vineyard rd and clear brook rd	Burlington		X		X	
Eagleville Brook	3100	1225	Upstream side	#43 Hunting Lodge Road (private driveway)	Mansfield	X			X	
Eagleville Brook	3100	1226	upstream	Separatist Road	Mansfield	X			X	
Eagleville Brook	3100	1230	downstream	NNT to Eagleville Brook Adj. To N. Eagleville Road	Mansfield	X			X	
Furnace Brook	3103	89	upstream	Orcuttville Road	Stafford	X	X		X	
Gardner Brook	3906	625	downstream	Bear Hill Road near Bishop Road intersection	Bozrah		X		X	
Means Brook	6024	1012	(blank)	DS Sawmill City Rd.	Shelton	X	X			
Myron Kinney Brook	3604	475	adjacent	Myron Kinney Road	Voluntown		X			X
Pease Brook	3905	6163	upstream	Mack Road	Lebanon	X			X	
PENDLETON HILL BROOK	1001	1748	Upstream Grindstone Hill Road	PENDLETON HILL BROOK NEAR CLARKS FALLS	North Stonington		X			X
Pequabuck River	4315	2660	(blank)	just upstream small Trib upstream of Barlow and Old Terryville Rd	Bristol	X	X		X	
Pomperaug River	6800	278	upstream	Judson Avenue	Woodbury	X	X			
Quinebaug River	3700	285	upstream	Route 197	Thompson		X		X	
Quinebaug River	3700	476	downstream	Route 12 and upstream Patchaug River Confluence	Griswold		X			X
Quinebaug River	3700	492	adjacent	Park at Kennedy Drive	Putnam		X		X	

Red Brook	2105	5561	(blank)	US of wells rd	Groton		X			X
Steele Brook	6912	329	downstream	East Aurora Street	Waterbury		X	X		
Susquetonscut Brook	3907	626	adjacent	route 32 upstream of route 87	Franklin	X			X	
West Branch Farmington River	4300	1746	behind	at Upcountry Sports	New Hartford	X	X			
West Branch Salmon Brook	4319	359	upstream 50 meters	Barndoor Road	Granby	X	X		X	
Willimantic River	3100	458	downstream	Stafford POTW	Wilmington	X	X		X	
Yantic River	3900	621	upstream	Stanton Road	Bozrah	X	X		X	

Species Distribution Maps 2010:

Cambarus robustus were found at 34% of the sites with at least 1 species present. The distribution was statewide and appears to be a very common species.

N=93 locations with crayfish present
WPLR sites 2010

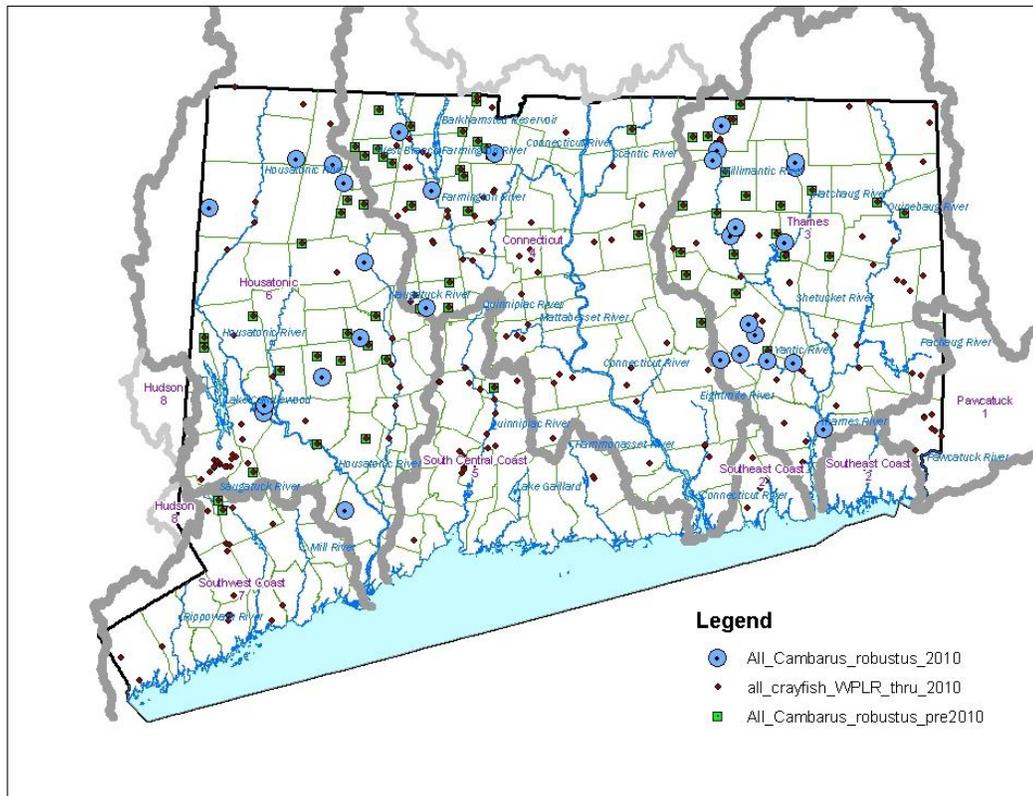
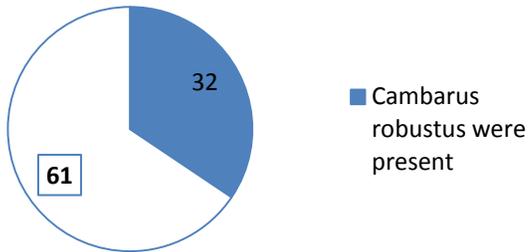


Figure 3. Distribution of *Cambarus robustus* in WPLR electro-fishing samples 2010 (as large blue circles), prior to 2010 (small green square) and locations not present in the sample (single red dot).

Orconectes limosus were the most commonly collected crayfish in the 2010 samples. It was observed in 60% of the locations with at least 1 species present. The distribution appeared to be even throughout the entire state.

N=93 locations with crayfish present WPLR sites 2010

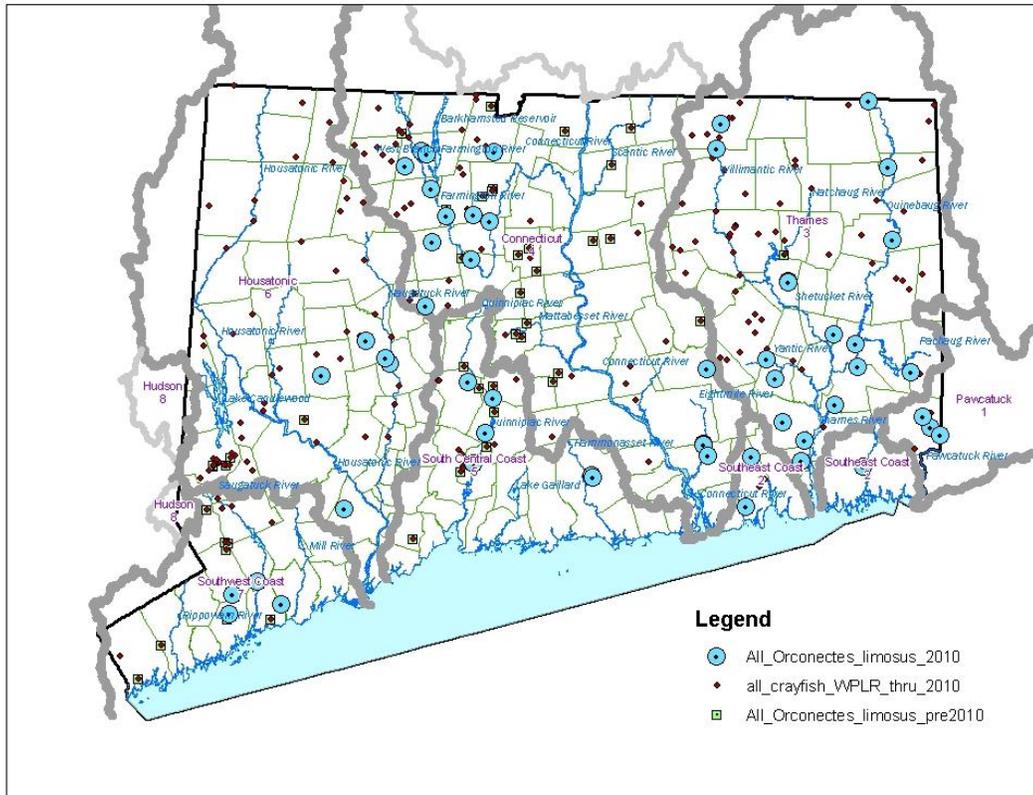
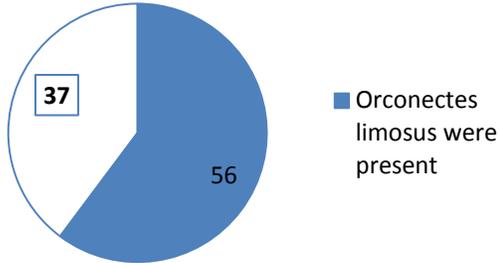


Figure 4. Distribution of *Orconectes limosus* in WPLR electro-fishing samples 2010 (as large blue circles), prior to 2010 (small green square) and locations not present in the sample (single red dot).

Orconectes rusticus were not commonly found during 2010 sampling as the majority of scheduled work sites were outside of the Housatonic basin, where this species is widely distributed. *O. rusticus* were found at only 3 sites (3% of sites) all of which were within the Housatonic major basin. No additional populations were observed in the Thames Major basin during 2010.

N=93 locations with crayfish present WPLR sites 2010

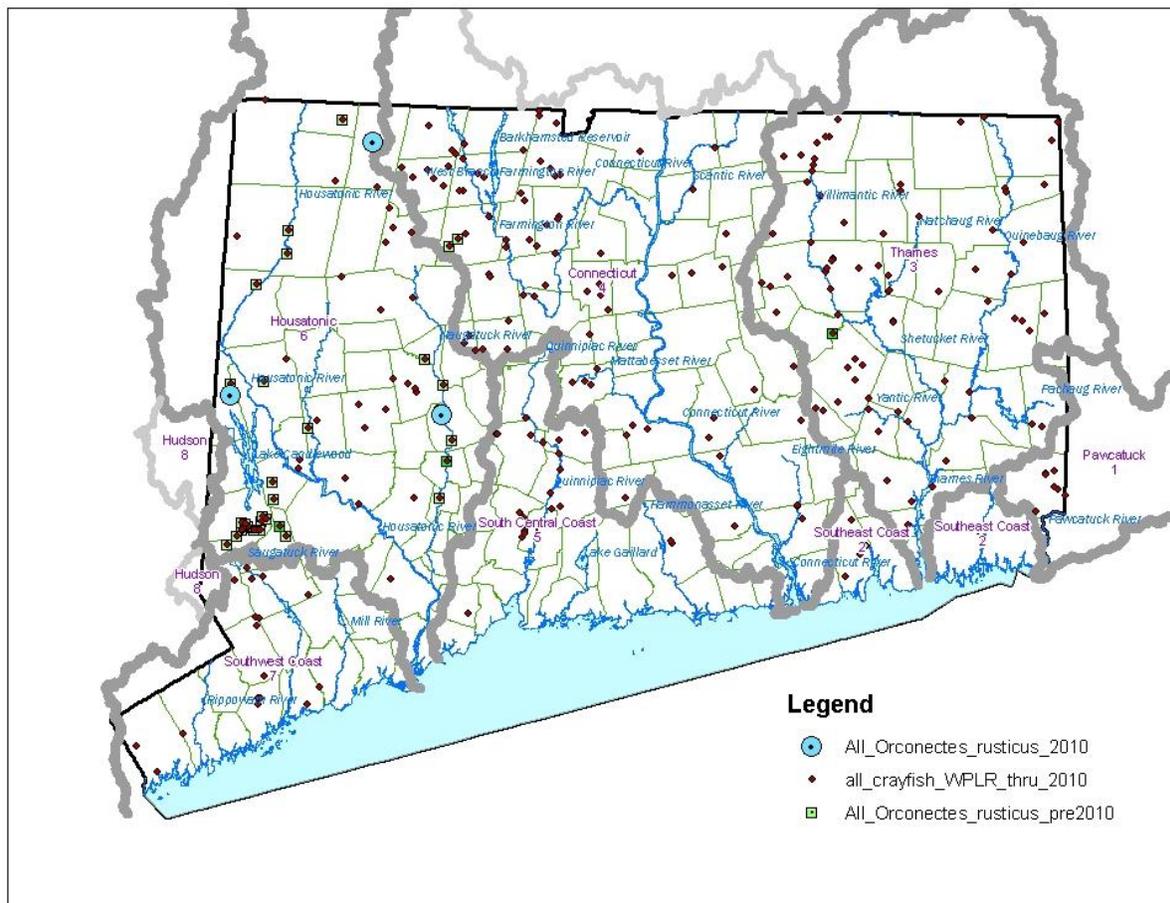
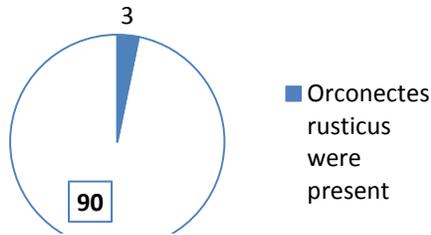


Figure 5. Distribution of *Orconectes rusticus* in WPLR electro-fishing samples 2010 (as large blue circles), prior to 2010 (small green square) and locations not present in the sample (single red dot).

Orconectes virilis were found at 29% of the sites with at least 1 species present. 2010 records were consistent with previous distribution data with the exception of a specimen collected in Sages Ravine Brook.

**N=93 locations with crayfish present
WPLR sites 2010**

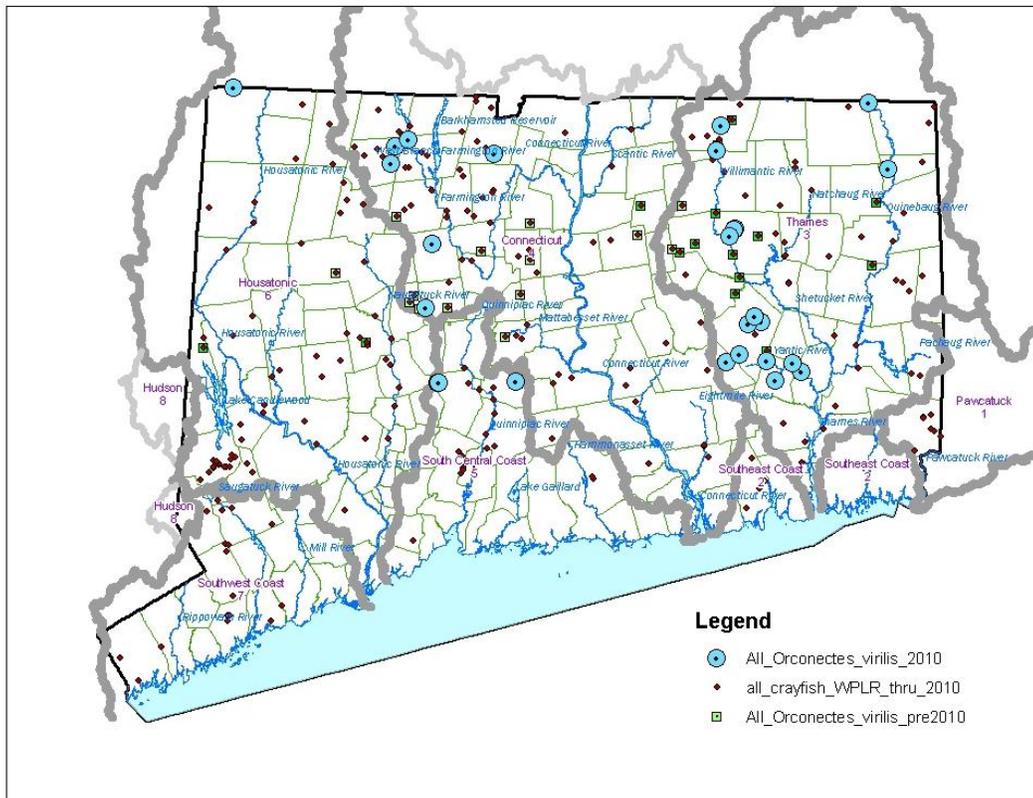
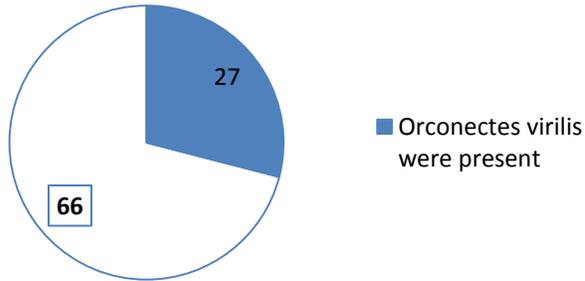


Figure 6. Distribution of *Orconectes virilis* in WPLR electro-fishing samples 2010 (as large blue circles), prior to 2010 (small green square) and locations not present in the sample (single red dot).

Procambarus acutus were found at 10% of the sites with at least 1 species present. As expected most observations were in streams located in southeastern Connecticut. However, a record of note was a specimen collected in Branch Brook, Eastford, Connecticut.

N=93 locations with crayfish present
WPLR sites 2010

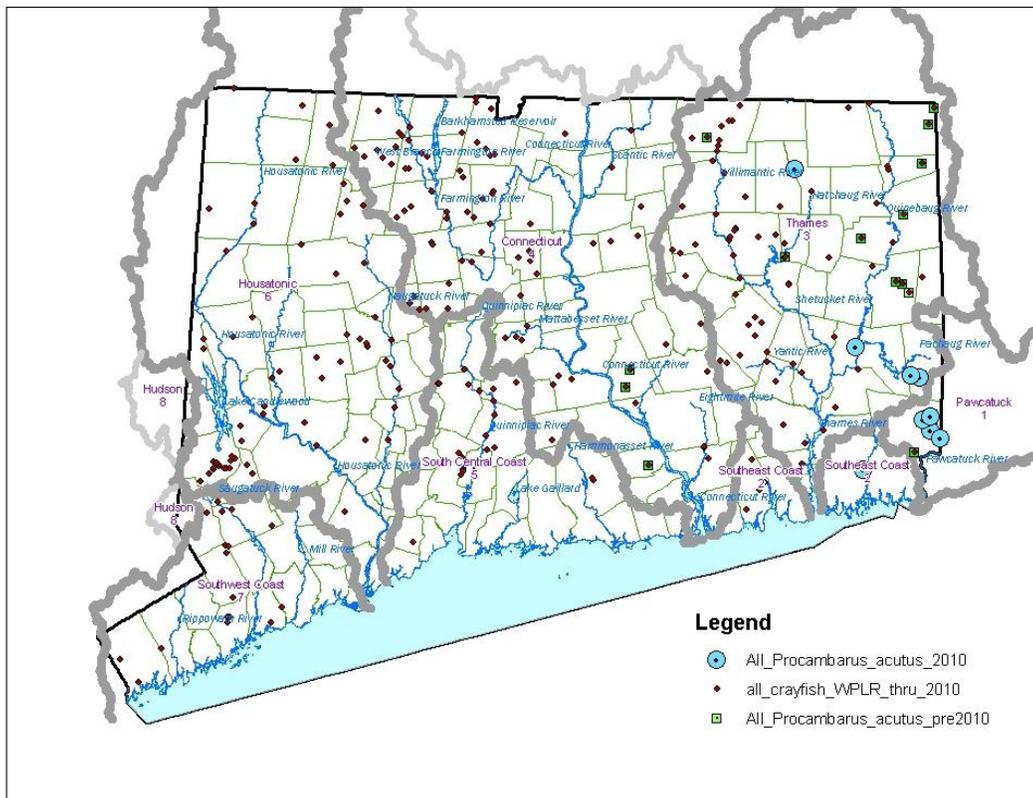
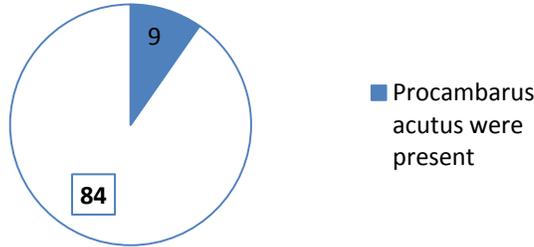


Figure 7. Distribution of *Procambarus acutus* in WPLR electro-fishing samples 2010 (as large blue circles), prior to 2010 (small green square) and locations not present in the sample (single red dot).