# A Report to the Division of Natural Heritage, Illinois Department of Natural Resources, Acct.# 1-5-39786

The Status of the Cricket Frog, Acris crepitans, in Northern Illinois: Project Progress Report

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## INTRODUCTION

Blanchard's cricket frog, Acris crepitans blanchardi, is a small, rugose frog averaging 1.6 – 3 cm in length. It can be found in almost all aquatic habitat types throughout the state of Illinois. Open or partly vegetated mud flats or mud banks seem to be the preferred micro-habitat. The cricket frog is short-lived with an average life expectancy of approximately four months (Burkett, 1984). Burkett (1984) also found in Kansas about 5% of the population survives the winter and complete population turnover occurs in about sixteen months. Chorusing commences around the end of April in Illinois and continues through the summer months. Metamorphosis occurs from July through September, depending on egg deposition date (Smith, 1961). Smith (1961) labeled the cricket frog as the most common and abundant amphibian in Illinois. The cricket frog has been documented from all 102 Illinois counties.

It has been reported that the cricket frog has dramatically declined in Michigan (Harding and Holman, 1992) and Wisconsin (Casper, 1996). A population of cricket frogs was recently discovered in Hennepin Co., Minnesota (Moriarty, Forbes and Jones, 1998). This population represents the first report of the species from Minnesota in the last 17 years. Christiansen (1998) reported that cricket frogs have disappeared from most of the northern two tiers of Iowa counties. Minton (1998) reported that cricket frogs have almost disappeared from the northern quarter of Indiana. A paper by Dr. Martin Greenwell, Dr. Val Beasley and Dr. Lauren Brown was recently published in the Shedd Aquarium publication Aquaticus in 1996. In this paper, the authors reported that the cricket frog is nearly gone from the northern third of Illinois. This statement is starting to become widely circulated as fact in publications and presentations by other herpetologists. However, no rigorous, scientific surveys have been conducted to determine if the cricket frog is actually declining in northern Illinois. Reporting speculation as fact can be potentially damaging to the field of amphibian decline studies as well as the credibility of amphibian biologists.

This project arose from three central points of interest. First and foremost: Is the cricket frog declining or disappearing from the northern third of Illinois? Second: Baseline data for a "common" amphibian species in Illinois such as the cricket frog is sorely lacking. Third: No rigorous, scientific surveys have been conducted on the status of the cricket frog in Illinois. Conducting a statewide survey will provide baseline data on which to ground judgements of status and perhaps serve as impetus for a long-term study. Other projects concerning cricket frog biology and distribution will be initiated by the author in the future. This report contains a brief summary of the results of the Fall 1998 and the Spring 1999 cricket frog surveys. The Fall 1998 survey took place in September and October and the Spring 1999 survey took place in May and June. A final report with statistical analyses will be submitted when the project is completed.

### STUDY AREAS

Historic localities, defined for this study as those localities with collection dates or observations made before 1980, were compiled from museum collections records, from the scientific literature and from field notes of reliable biologists. Sites with obscure data (i.e. "Chicago" or "near Quincy") or sites known to be destroyed or developed were not considered. A line of demarcation extending from Cissna Park (Iroquois Co.) in eastern Illinois to Nauvoo (Hancock Co.) in western Illinois served to split localities in to either southern Illinois sites or northern Illinois sites. This line of demarcation was derived from cricket frog collections data and from observations by Illinois herpetologists.

Twenty northern sites and ten alternates were randomly selected from a pool of 46 northern sites. Similarly, twenty southern sites and ten alternates were randomly selected from a pool of 82 southern sites.

#### **METHODS**

Decision rules were drawn up to provide direction on when a site could or could not be surveyed. A site could not be surveyed under the following conditions: 1) rain, 2) flooded site, 3) site has been recently scoured or swept by high water levels and 4) air temperatures below 60° F. A site was rejected if the habitat was deemed unsuitable or if the collection site was destroyed or developed. An example of unsuitable habitat is a heavily vegetated stream where there is no open bank or mud flats.

At each site a visual encounter survey (VES) was conducted, usually for 15 minutes. A visual encounter survey involves a researcher walking through an area/habitat for a prescribed amount of time systematically searching for animals (Crump and Scott, 1994). The number of cricket frogs was recorded and used to calculate relative abundance. Starting in the Spring 1999 survey season, effort and presence/absence was recorded for some sites which were not surveyed for relative abundance because of decision rule violations. Relative abundance is calculated as the number of cricket frogs (N)/person hour and the number of cricket frogs (N)/kilometer (km). A stopwatch was used to record time and a pedometer was used to record distance. Weather conditions, habitat characteristics and other environmental variables were recorded at each site.

# RESULTS

#### **NORTHERN SITES**

1) CARROLL COUNTY: 2.75 km SW of Wacker, tributary of the Savanna-York Ditch at Scenic Bluff Rd.; T24N, R04E section 29 SW, SW; Wacker quadrangle.

Three cricket frogs were observed in 0.90 km (0.56 mi) on 18 September 1998. The site was not surveyed on 15 June 1999 as the site had been recently swept by high water levels.

2) COOK COUNTY: W of Glenview at Beck Lake; T42N, R12E section 31; Park Ridge quadrangle.

Beck Lake was visited on 9 September 1998 and 22 June 1999. No cricket frogs were observed. Bullfrogs (*Rana catesbeiana*) are common at this site.

3) COOK COUNTY: W of Palos Hills at Tuma Lake; T37N, R12E section 09 SW; Palos Park quadrangle.

Tuma Lake was visited on 9 September 1998 and 22 June 1999. No cricket frogs were observed. Large numbers of bullfrogs (*Rana catesbeiana*) and green frogs (*Rana catesbeiana*) occupy this site.

4) **DeKALB COUNTY:** 1.75 km ENE of Somonauk, Somonauk Creek at U.S. Rt. 34; Somonauk quadrangle.

No cricket frogs were observed on 11 September 1998. The site was not surveyed on 18 June 1999 as the banks had been recently swept by high water.

5) HENDERSON COUNTY: 1.75 km NE of Gulfport at Crystal Lake; T10N, R06W section 34 NE; Burlington, Iowa - ILL. quadrangle.

One cricket frog was observed in 0.98 km (0.61 mi) on 22 September 1998. The site was not surveyed on 9 June 1999 because of vehicle problems.

6) HENRY COUNTY: 8 km NNE of Kewanee, Johnson Lake in Johnson Sauk Trail State Park; T16N, R05E section 35; Kewanee North quadrangle.

Seven cricket frogs were observed in 0.93 km (0.58 mi) on 25 September 1998. Eleven cricket frogs were observed in 0.64 km (0.40 mi; 8 minutes) on 8 June 1999.

7) IROQUOIS COUNTY: 2.2 km N of Donovan, Beaver Ditch No. 2 at Co. Rd. 2700E; T28N, R11W section 16 SW, SW; Donovan quadrangle.

Site rejected because of unsuitable habitat. Beaver Ditch was heavily vegetated - essentially leaving no open banks in which cricket frogs could utilize for habitat.

8) KANE COUNTY: 3.2 km SW of West Dundee, Jelke's Creek at Boncosky Rd.; T42N, R08E section 33 NW; Elgin quadrangle.

Site visited on 18 June 1999. Most of Jelke's Creek flows through a residential area. Permission is being sought to survey the stretch of Jelke's Creek close to the Fox River, which is not in a developed area.

9) LAKE COUNTY: 3.2 km W of Deerfield, pond north of Deerfield Rd. between Rt. 45 and Des Plaines River; T43N, R11E section 26 SW, SE, SW; Wheeling quadrangle...

Site rejected. Owner of property denied permission to survey pond.

**10) LAKE COUNTY**: 2.75 km NNW of Volo at Volo Bog; T45N, R09E section 28 SW, NE; Wauconda quadrangle.

Volo Bog was visited on 9 September 1998 and 22 June 1999. No cricket frogs were observed. Bullfrogs (*Rana catesbeiana*), green frogs (*Rana clamitans*) and northern leopard frogs (*Rana pipiens*) were observed in the bog.

11) McLEAN COUNTY: 10 km N of Normal at Evergreen Lake; T25N, R02E section 07 SE and section 08 SW, SW, SW; El Paso quadrangle.

Alternate site visited 8 June 1999. Evergreen Lake's level had been up because of recent heavy rains but was receding at the time of survey. Two different transects were surveyed. One cricket frog was observed along a transect close to the boat ramp.

**12) MARSHALL COUNTY:** 5.5 km W of Sparland, Senachwine Creek at IL Rt. 17; T12N, R09E section 07 SE; La Prairie quadrangle.

As of 25 September 1998, the landowner (James Riddell) revoked permission to survey Senachwine Creek on his property. Cricket frogs were observed at this site in the Spring 1998 survey.

13) MARSHALL COUNTY: 3.75 km NNW of Sparland at Thenius Creek; T13N, R09E section 34 NW, SW; Lacon quadrangle.

Site dropped because of accessibility problems.

**14) OGLE COUNTY:** 13 km S of Oregon, Clear Creek at Lowden Rd.; T22N, R10E section; Daysville quadrangle.

Site dropped because of accessibility problems.

**15) OGLE COUNTY:** 2 km NW of Rochelle and just E of Flagg Center, Gardener's Creek at Flagg Rd.; T40N, R01E section 15 SW, SW, NE; Rochelle quadrangle..

Alternate site visited on 15 June 1999. Site not surveyed because the creek had been recently swept by high water levels.

**16) PEORIA COUNTY**: 6 km SSW of Laura, Swab Run at McClellan Rd.; T10N, R05E section 08 SE; Elmwood quadrangle.

Eighteen cricket frogs were observed in 0.64 km (0.40 mi) on 23 September 1998. The site was not surveyed in the spring to comply with landowner wishes.

17) WARREN COUNTY: 3.5 km S of Alexis, Henderson Creek at Co. Rd. 1200E; T12N, R01W section 18 SW; Alexis quadrangle.

Fourteen cricket frogs were observed in 0.80 km (0.50 mi) on 22 September 1998. The site was not surveyed on 9 June 1999 as water levels were high because of heavy rain the previous day and night.

**18) WARREN COUNTY:** 3 km S of Cameron, Slug Run at Co. Rd. 1400E; T10N, R01W section

Fifty-eight cricket frogs were observed in 1.05 km (0.65 mi) on 23 September 1998. The site was not surveyed on 9 June 1999 because the banks had been swept by high water due to recent rainfall.

19) WARREN COUNTY: 1.7 km N of Utah at unnamed stream; T12N, R01W section 27 SE; Galesburg West quadrangle.

Twenty-six cricket frogs were observed in 1.06 km (0.66 mi) on 22 September 1998. The banks had been swept by high water on 9 June 1999. The stream was surveyed to record presence/absence. No cricket frogs were observed along the stream. However, one was observed in a ditch near the stream.

**20)** WHITESIDE COUNTY: W of Penrose, Elkhorn Creek at Penrose Rd.; T22N, R07E section 16 SW and section 21 NW; Hazelhurst quadrangle.

Cricket frogs were not observed on the 18 September 1998 survey. Elkhorn Creek was not surveyed on 15 June 1999 because the banks had been recently swept by high water.

**21) WHITESIDE COUNTY**: 3.25 km N of Sterling, Sugar Creek at Freeport Rd.; T21N, R07E section 03 SE, NE and NE, SE; Sterling quadrangle.

Sugar Creek was surveyed on 18 September 1998. No cricket frogs were observed. Sugar Creek was not surveyed on 15 June 1999 because the banks had been recently swept by high water.

**22)** WILL COUNTY: 4 km SSE of Wilmington, Forked Creek on the E side of IL Rt. 102; T32N, R10E section 07 SE; Symerton quadrangle.

Forked Creek was surveyed on 11 September 1998. No cricket frogs were observed. Forked Creek could not be surveyed on 18 June 1999 because of high water.

**23) WILL COUNTY:** E of Goodenow, Plum Creek at Goodenow Rd.; T34N, R14E section 33 NW; Steger quadrangle.

Alternate to replace rejected site. Plum Creek was not surveyed on 18 June 1999 because the banks had been recently swept by high water. Water levels were returning to normal. Habitat suitable for cricket frogs is present with ample open mud banks and mud flats.

**24) WINNEBAGO COUNTY:** 3 km E of Machesney Park, Pierce Lake in Rock Cut State Park; T45N, R02E section 27 SE; Caledonia quadrangle.

Pierce Lake was visited on 17 September 1998 and 15 June 1999. No cricket frogs were observed. Willow Creek below the spillway of Pierce Creek was searched for cricket frogs on 17 September 1998. Suitable habitat for cricket frogs occurs along Willow Creek. Ranid frogs and tadpoles, however, were numerous in and along Willow Creek.

**25) WOODFORD COUNTY:** 9.5 km SSW of El Paso, Sixmile Creek below Evergreen Lake; T25N, R01E section 01 SW; El Paso quadrangle.

Nineteen cricket frogs were observed in 0.71 km (0.44 mi) on 25 September 1998. Twenty to thirty more were observed 15-20 feet away from the stream's edge. Sixmile Creek was not surveyed on 8 June 1999 because of high water levels. One cricket frog male was heard calling during this visit.

#### **SOUTHERN SITES**

1) ADAMS COUNTY: 18 km SW of Mt. Sterling, Crabapple Lake in Siloam Springs State Park; T02S, R05W section 24 NW, NW; Kellerville quadrangle.

Thirty-one cricket frogs were observed in 0.72 km (0.45 mi) on 29 September 1998. A new transect was surveyed on 26 May 1999 and 78 cricket frogs were observed in 0.87 km (0.54 mi; 12 minutes).

2) ALEXANDER COUNTY: 2.5 km E of Miller Park, Lake Creek below Horseshoe Lake spillway; T16S, R02W section 21 NE, SE; Cache quadrangle.

Alternate site. Not surveyed because banks had been recently swept by high water. One cricket frog male was heard calling from a nearby ditch on the Horseshoe Lake side of Promised Land Road.

3) BOND COUNTY: 0.5 km N of Reno at Yankee Creek; T06N, R04W section 11 NE, NW; Sorento South quadrangle.

The temperature was below 60° F on the 8 October 1998 visit. Five cricket frogs were observed around the bridge. Effort was not recorded for presence/absence on this visit. Yankee Creek had been recently swept by high water levels when visited on 15 May 1999. However, water levels had returned to normal and a presence/absence survey was conducted. Nineteen cricket frogs were observed in 1.27 km (0.79 mi).

4) CHAMPAIGN COUNTY: Busey Pasture (portion of Busey Woods in Crystal Lake Park), Urbana; T19N, R09E section 08 NW; Thomasboro quadrangle.

Alternate site. Two ponds were surveyed, no cricket frogs were observed. Cricket frog males were heard calling NNE of this site in 1997 in the Saline Branch Drainage Ditch.

5) CLARK COUNTY: 3 km SSW of Marshall, Lincoln Trail Lake in Lincoln Trail State Park; T10N, R12W section 35; Snyder quadrangle.

On 28 September 1998, 81 cricket frogs were observed in 1.11 km (0.69 mi). The site was next visited on 21 May 1999 and 32 cricket frogs were observed in 1.03 km (0.64 mi). A mud flat was also surveyed on 21 May 1999. This mud flat occurs where an unnamed stream enters Lincoln Trail Lake. I walked 0.16 km (0.10 mi) along the perimeter of this mud flat and counted 79 cricket frogs.

6) **HAMILTON COUNTY**: 2.75 km E of Broughton, North Fork Saline River at Co. Rd. 200N; T07S, R07E section 03 SW; Broughton quadrangle.

The North Fork Saline River chronically floods after rain events. This is because the North Fork is channelized and receives run-off from ag fields and drain tile. The North Fork was visited on 14 October 1998 and 12 May 1999. Both times there was ample evidence of recent high water. One cricket frog was observed on the bank near the bridge during the October visit. Effort was not recorded for this observation. However, effort was recorded for the May visit. Eight cricket frogs were observed in 0.71 km (0.44 mi; nearly 13 minutes). Cricket frogs had been observed on the May 1998 visit on top of the levee, approximately 40-50 feet from the edge of the water. Ample evidence of a major flooding event was also evident on the May 1998 visit.

7) HARDIN COUNTY: 2.8 km NE of Elizabethtown, tributary Hosick Creek and Ohio River at IL Rt. 146; T12S, R08E section 13 SW, NW; Rosiclare quadrangle.

This site was not surveyed on 14 October 1998 as the stream had been recently swept by high water. No cricket frogs were observed on 11 May 1999. Evidence of high water

was evident on the latter visit but I could not discern how recent this event had taken place. Cricket frogs are present in the immediate area as males were heard calling from a farm pond located at T12S, R08E section 14 SE, NE; Rosiclare quadrangle.

8) JACKSON COUNTY: NW of Aldridge, Big Muddy River at IL Rt. 3; T11S, R03W section 18 SE; Wolf Lake quadrangle.

The Big Muddy River at IL Rt. 3 is also a site that frequently floods. Evidence of flooding all the way to the base of levee was present on 15 October 1998. Seven to eight inches of rain had fallen in the headwaters of the Big Muddy in the previous one to two weeks. The water had since receded within the banks. Seven cricket frogs were observed, one on the bank of the Big Muddy and six on the floodplain. Effort was not recorded for this visit. The Big Muddy was flooded to the levee on 7 May 1999. I walked 0.37 km (0.23 mi; 5 minutes) along the base of the levee and observed no cricket frogs.

9) **JEFFERSON COUNTY**: 3 km SW of Scheller at Scheller Lake West; T04S, R01E section 17 NW, SW; Tamaroa quadrangle.

Scheller Lake West was visited on 16 October 1998 and 149 cricket frogs were observed in 1.32 km (0.82 mi). Fifty-two cricket frogs were observed in 0.97 km (0.60 mi) on 6 May 1999. This site is very diverse herpetologically with the following species being observed in these two visits: smallmouth salamander (Ambystoma texanum), Fowler's toad (Bufo fowleri), cricket frog (Acris crepitans), chorus frog (Pseudacris triseriata), bullfrog (Rana catesbeiana), southern leopard frog (Rana sphenocephala), painted turtle (Chrysemys picta), eastern box turtle (Terrapene carolina), western (ornate) box turtle (Terrapene ornata), common musk turtle (Sternotherus odoratus), eastern hognose snake (Heterodon platirhinos), plainbelly water snake (Nerodia erythrogaster) and the rough green snake (Opheodrys aestivus).

**10) JERSEY COUNTY:** Mill Creek near Elsah; T06N, R11W various sections; Elsah quadrangle.

Site rejected because of accessibility problems.

11) JOHNSON COUNTY: S of Goreville, lake in Ferne Clyffe State Park; T11S, R02E section 27; Goreville quadrangle.

The fall visit took place on 14 October 1998 and 158 cricket frogs were observed in 0.87 km (0.54 miles). The lake was next visited on 11 May 1999 and 82 cricket frogs were observed in 1.24 km (0.77 miles).

**12) JOHNSON COUNTY:** 3.5 km N of Belknap at Little Black Slough; T13S, R02E section 26 SE, NE; Karnak quadrangle.

Alternate site used to replace rejected site. Cricket frogs are exceedingly abundant at Little Black Slough. At least 1000-2000 cricket frogs were observed along Tupelo Hiking Trail and the surrounding forest, a good distance away from available water sources. On 15 October 1998, I walked 0.56 km (0.35 miles) and counted 193 cricket frogs. Doubtless I missed many more as the shoreline is heavily cluttered with numerous fallen trees. I counted 156 cricket frogs on 11 May 1999 in 0.71 km (0.44 miles). Cricket frogs were not as common this time on the Tupelo Hiking Trail (n=19 in approximately 1.35 km/0.84 miles). Cricket frogs were numerous in the forest immediately surrounding Little Black Slough on both visits.

13) LAWRENCE COUNTY: 2 km NE of Sumner; Red Hills Lake in Red Hills Lake State Park; T03N, R13W section 02 NW; Sumner quadrangle.

Alternate site used to replace rejected site. Red Hills Lake was visited 21 May 1999 and 25 cricket frogs were observed in 1.05 km (0.65 mi).

**14) McDONOUGH COUNTY:** 2.5 km N of Colchester, pond in Argyle Lake State Park; T06N, R04W section 36 SE; Colchester quadrangle.

This site was visited on 30 September 1998 and one cricket frog was observed in 0.45 km (0.28 mi; 7 minutes). Two cricket frogs were observed in 0.42 km (0.26 mi; 7 minutes) on 26 May 1999. Bullfrogs (*Rana catesbeiana*) and green frogs (*Rana clamitans*) are abundant at this pond and may be the reason for the low numbers of cricket frogs.

**15) MACOUPIN COUNTY:** 1.25 km S of Hettick, Otter Creek at IL Rt. 111; T10N, R08W section 06 NW, SW; Hettick quadrangle.

Otter Creek was low with extensive sand/gravel bars on my visit on 7 October 1998. Twelve cricket frogs were observed in 0.98 km (0.61 mi). Evidence of recent high water was present on the 16 May 1999 visit. Since conditions violated my decision rules for surveying cricket frogs for relative abundance numbers, I instead recorded effort for presence/absence. One cricket frog was observed in 0.68 km (0.42 mi; nearly 10 minutes). Otter Creek receives drain tile run-off from adjacent ag fields.

**16) MADISON COUNTY:** 2.75 km NNW of Highland, Highland Lake at Silver Lake Park; T04N, R05W section 19 SE, SE; Grantfork quadrangle.

No cricket frogs were observed on 7 October 1998. Three cricket frogs were observed on 15 May 1999 in 1 km (0.62 mi).

17) MASON COUNTY: NE of Buzzville, Eagle Bluff Access Area at Lake Chautauqua; T22N, R08W section 10 NE; Topeka quadrangle.

The site near the Illinois Natural History Survey Forbes Field Station is chronically flooded. A new site, the Eagle Bluff Access Area on Lake Chautauqua, was chosen because of its accessibility and in hopes that it does not flood as often. The site near the

INHS field station was visited on 30 September 1998. The ground between the levee and lake was mucky with standing pools of water and deep mud. An INHS staff member told me that the water was lowered late and that the level was about to be raised again. Water levels were being manipulated to control botulism that affects waterfowl. Eagle Bluff Access Area was visited on 26 May 1999. The level of the lake was high and evidence was present that level had been even higher in recent times. Habitat consists of forested, sandy banks. No cricket frogs were observed.

**18) PERRY COUNTY:** 2.2 km SSE of Du Bois, tributary of the Little Muddy River at Robin Rd.; T04S, R01W section 03 SW, SW; Tamaroa quadrangle.

Twelve cricket frogs were observed in 0.92 km (0.57 mi; 12 minutes) on 16 October 1998. Two additional cricket frogs were observed post-survey. The banks of the stream had been recently swept by high water on 6 May 1999. The water level was still high, due to recent heavy rains. Since conditions violated decision rules, I conducted a presence/absence survey. Five cricket frogs were observed in 0.16 km (0.10 mi; 3 minutes) along the north bank of the stream. Two cricket frogs were observed in 0.23 km (0.14 mi; 3 minutes) along the south bank of the stream. Another cricket frog was observed post-survey 11.1 meters (36.5 feet) north of the stream at the edge of an ag field.

19) POPE COUNTY: 7.75 km SE of Stonefort at Burden Falls; T11S, R05E section 15 NE; Stonefort quadrangle.

Alternate site visited to possibly replace a chronically flooded site. Burden Falls was visited on 12 May 1999. The banks had been recently swept by high water. A presence/absence survey was conducted in the stream south of Burden Falls. No cricket frogs were observed in 0.48 km (0.30 mi; 5 minutes).

**20) POPE COUNTY:** 5.25 km SE of Rosebud, Cave Creek at Co. Rd. 1700N; T14S, R06E section 27 SE, SE; Brownfield quadrangle.

Cave Creek was visited on 14 October 1998 and 37 cricket frogs were observed in 1.27 km (0.79 mi). Only one cricket frog was observed in 1.43 km (0.89 mi) on 11 May 1999.

**21) RANDOLPH COUNTY**: 4.4 km N of Chester at the Randolph County State Conservation Area; T06S, R06W section 30 SE; Chester quadrangle.

The site was visited on 16 October 1998 and 167 cricket frogs were observed in 0.69 km (0.43 mi). An additional three cricket frogs were observed post-survey at the end of the transect. On 6 May 1999, 106 cricket frogs were observed in 1.17 km (0.73 mi). An additional two cricket frogs were observed post-survey at the end of the transect.

**22) TAZEWELL COUNTY:** 6.4 km S of Green Valley, Main Ditch at IL Rt. 29; T22N, R05W section 14 SW, SW, SW or section 15 SE, SE, SE; Natrona quadrangle.

Alternate site. The Main Ditch was visited on 26 May 1999. The banks had recently been swept and the water level was still high, so no survey was conducted.

**23)** UNION COUNTY: 0.5 km W of Ware at Running Lake Ditch; T12S, R03W section 26 NE; Ware quadrangle.

Seventeen cricket frogs were observed in 1.16 km (0.72 mi) on 15 October 1998. Running Lake Ditch was flooded out of its banks on 7 May 1999. Two cricket frogs were heard calling during a presence/absence survey (0.37 km/0.23 miles; 5 minutes).

**24) VERMILION COUNTY:** 7 km W of Danville, Middle Fork Vermilion River and Long Pond; T19N, R12W section 09 NW; Danville NW quadrangle.

Two cricket frogs were observed in 1.40 km (0.87 mi) along the west bank of the Middle Fork on 26 September 1998. An additional three cricket frogs were observed pre-survey. Twelve cricket frogs were observed in 1.09 km (0.68 mi; 12 minutes) along the east bank of the Middle Fork on the same date. Also on 26 September, 46 cricket frogs were observed along Long Pond in 0.97 km (0.60 mi).

The Middle Fork of the Vermilion River was not surveyed on 4 June 1999 because the banks had been recently swept by high water due to recent heavy rains. Nine cricket frogs were observed at Long Pond in 1.05 km (0.65 mi) on 4 June 1999.

**25) VERMILION COUNTY:** SE of Muncie at Muncie Pond (S side U.S. Rt. 150); T19N, R13W section 16 NW; Oakwood quadrangle.

Only one cricket frog was observed along Muncie Pond in 0.93 km (0.58 mi) on 26 September 1998. Three additional cricket frogs were observed in the ditch and spring outflow areas that border the north side of Muncie Pond.

Muncie Pond was not surveyed on 4 June 1999. I learned that Muncie Pond was no longer owned by the Village of Muncie. It is now privately owned and I was advised by local residents to seek permission from the new owner before conducting my survey.

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