



## ***Iowa's Frog and Toad Call Survey*** 2005



### ***2005 Survey Results***

2005 was the 15<sup>th</sup> year for Iowa's frog and toad call survey. A total of 38 routes in 31 counties were surveyed. The routes surveyed contained a total of 197 sites which were visited 530 times in the course of 3 runs (Table 1). Participation in the survey was down slightly from 2004 which had 40 routes and 227 sites surveyed. The top three wetland communities surveyed were permanent open water, open marsh, and timbered riverine. These descriptions characterize over half of the sites surveyed (Table 2).

The average weather conditions were well within the parameters of the survey. No major weather irregularities were reported though a few surveyors noted that it was a particularly hot, dry summer. Water temperatures for over half of the records were reported and the average for each run was well above the recommended levels. Surveys were generally run on calm (low wind) clear nights (Table 3).

Chorus frogs are consistently the most reported and abundant species and in 2005 they were heard at the most sites (61 % of total sites) and had the highest average call index (2.06, Table 4). They were especially dominant during the first run. American toads and Eastern gray treefrogs were the second and third most reported species and they clearly dominated the middle run. In fact, while chorus frogs are found on more sites, the American toad is heard on more surveys because its singing chronology allows it to be heard more evenly across all three runs. In addition, while the American toad has been surging in recent years, the Eastern gray treefrog appears to be in a slight decline (Fig. 1).

Four species were not heard on this year's survey: wood frog, crawfish frog, great plains toad, and plains spadefoot (Table 4). The last report of a plains spadefoot and great plains toad was 2000. The lack of reports may be attributed to the loss of surveyed routes within the limited range of these species. The crawfish frog has been reported only once in the 15 years of the survey and the wood frog is an unverified state resident, which has been reported variably throughout the years.

Overall, the 2005 data was consistent with recent years. There is a suggestion that American toads are on the rise while gray treefrogs are dipping slightly. Future years will reveal whether this is a long-term trend or a short-term fluctuation, perhaps due to weather trends, which illustrates the value of this survey in providing yearly variability in Iowa's frog and toad populations.

### ***In the Coming Year***

We hope to accomplish a number of frog and toad related projects during the coming year. Dr. Karen Kinkead, our research specialist in herps and in inventory and monitoring, will be embarking on an ambitious trend analysis using 15 years of data. The technique being used will hopefully shed light on the wetland extinction and colonization rates for each frog and toad species.

Some of you have attended a NatureMapping workshop to receive training in herp surveys and know that we have been having technical difficulties with our online database. We hope to solve those problems this year and reinvigorate the training program for next year. This program is key to providing further training for interested existing volunteers as well as recruiting new volunteers as the number of routes being surveyed has decreased steadily in the last few years.

Another exciting development for the coming year is the reinstatement of a Midwest regional herp study group spearheaded by PARC (Partners in Amphibian and

Reptile Conservation, [www.parcplace.org](http://www.parcplace.org)). This regional group will allow coordination between states about herp issues. For example, a number of our neighboring states are concerned about cricket frog numbers (Iowa's numbers appear to be strong in contrast) and this group will allow us to examine this potential problem on a regional scale and hopefully come up with solutions.

**Thank You!**

There are not very many surveys that span 15 years. That Iowa's frog and toad survey has is a tribute to your dedication and willingness to spend several nights each summer driving around and listening for frog and toad songs. Finding a night that fits the weather parameters, fits into your schedule, and that won't totally disrupt your sleep patterns is a challenge which many of you have admirably conquered for many years. We cannot say enough how important and appreciated your participation in this survey is. Thank you.

And if you know of any other folks who like to hang around outside at night please direct them our way!

**Table 1. 2005 Route and Site Data**

<i>Num. of Active* Routes</i>	50
<i>Num. of Active Routes Run in 2005</i>	38 (76%)
<i>Routes visited Run 1</i>	33
<i>Routes visited Run 2</i>	37
<i>Routes visited Run 3</i>	33
<i>Num. of Active Sites</i>	277
<i>Num. of Active Sites Run in 2005</i>	197 (71%)
<i>Sites visited Run 1</i>	169
<i>Sites visited Run 2</i>	191
<i>Sites visited Run 3</i>	170
<i>Total Num. of Visits made in 2005</i>	530
<i>Total Number of Counties Surveyed</i>	31

\* Active = Site/route visited within the last two years.

**Table 2. Type of Wetlands Surveyed**

<b>Wetland Type</b>	<b>Num. Sites in 2005</b>	<b>% of Total</b>
Permanent Open Water	56	28.7%
Open Marsh	30	15.4%
Timbered Riverine	25	12.8%
Cattail Marsh	23	11.8%
Open Riverine	18	9.2%
Unknown	16	8.2%
Ephemeral Flooded Area	11	5.6%
Wet-Meadow	9	4.6%
Shrub Marsh	7	3.6%

**Table 3 2005 Weather and Timing for each Survey Run**

<b>Weather and Timing</b>	<b>Runs</b>		
	1	2	3
<i>Average Date</i>	4/21/2005	5/25/2005	6/29/2005
<i>Water Temp (F)</i>	58.48	67.46	75.84
<i>Average Beginning Air Temp (F)</i>	59.03	67.17	76.94
<i>Average End Air Temp (F)</i>	55.22	63.96	73.14
<i>Average Wind (combined Begin and End)*</i>	1.45	1.19	1.04
<i>Avg Cloud Cover (combined Begin and End)**</i>	1.02	0.62	0.53

\* Wind Codes: 0: 0 mph, 1: 1-3 mph, 2: 4-7 mph, 3: 8-12 mph, 4: 13-18 mph, 5: 19-24 mph

\*\* Cloud Codes: 0: Clear, 1: Partly Cloudy, 2: Cloudy, 3: Fog, 4: Drizzle, 5: Rain Shower

**Table 4. 2005 Frog and Toad Survey Species Data**

**Number of Records Per Run**  
(count of the num. of site surveys during which species was detected)

<i>Species</i>	<i>Sites on which species detected</i>	<i>% of Total Sites</i>	<i>Number of Records Per Run</i>			<i>Total Num. Visits</i>	<i>Average call index 1=Single to 3=Full Chorus</i>
			1	2	3		
<i>Chorus Frog</i>	120	60.9%	104	50	7	161	2.06
<i>American Toad</i>	117	59.4%	52	94	27	173	2.01
<i>Eastern Gray Treefrog</i>	92	46.7%	10	75	57	142	1.84
<i>Cricket Frog</i>	82	41.6%	3	58	66	127	2.02
<i>Bull Frog</i>	75	38.1%	2	19	69	90	1.28
<i>Leopard Frog</i>	71	36.0%	51	24	11	86	1.34
<i>Spring Peeper</i>	37	18.8%	29	18	1	48	1.7
<i>Green Frog</i>	37	18.8%	1	11	32	44	1.32
<i>Cope's Gray Treefrog</i>	36	18.3%	2	28	19	49	1.6
<i>Pickeral Frog</i>	5	2.5%	4	3	0	7	1.57
<i>Woodhouse's Toad</i>	1	0.5%	0	1	0	1	1
<i>Wood Frog</i>	0	0.0%	0	0	0	0	NA
<i>Crawfish Frog</i>	0	0.0%	0	0	0	0	NA
<i>Great Plains Toad</i>	0	0.0%	0	0	0	0	NA
<i>Plains Spadefoot</i>	0	0.0%	0	0	0	0	NA

**Fig 1. These graphs show the percent of wetlands where the frog or toad was found at any time during the given year between 1995 and 2005. The data was restricted to occurrences which were recorded within the historic range of the animal based on the Iowa GAP analysis project.**

