



Michigan Department of Natural Resources  
Wildlife Division  
Natural Heritage Program



# Michigan Frog Survey Update

December, 1998

## Steady as She Goes

The Michigan Frog and Toad Survey is still going strong in our third year! We received data from 62 percent of the registered routes, which is very good. There are many of you that have stayed with it all three years. Your work and dedication is appreciated!

If you have returned data more than one year, there's a lapel pin included with this update as a token of our appreciation for your hard work. The first year rookies will get the patch. Please let me know if you did not receive either one of these items if you did return data this year.

## Validate Observations of Cope's Gray Treefrog

I have been discussing the reported occurrences of the Cope's gray treefrog with Jim Harding, a herpetologist at Michigan State University. It seems as though many of the reported observations of this species may not be valid. This is a difficult species to differentiate from the Eastern gray treefrog and even from some calls made by the spring peeper. Jim says that "field differentiation of the two gray treefrogs is not for the timid or faint-at-heart!"

In order to be very sure you are telling the two species apart, you must be hearing them under the same conditions, especially temperature and humidity. "If the observer has heard both species calling at the same time, under good conditions, then the difference should be clear. Mixed species choruses are the easiest to identify, but the call rate is affected by temperature, and by the status of the chorus itself (calling males early in the season may sound differently than they do later in the season)." Generally, the Easterns have a slow, musical trill, while the Cope's have a shorter, lower-pitched nasal trill. It is thought that the Eastern is more widely distributed than the Cope's, but the relative distribution of these two species is poorly known.

In order to get a better handle on this treefrog puzzle, we are going to request verification of observations on the Cope's in the 1999 survey

season. The best type of validation is a recording that you can send to me (please, no micro-tapes, I don't have a player that will play them). If you are a knowledgeable biologist or naturalist-type and are confident that you can differentiate the calls, please state so on your data sheet if you report Cope's calls. If recording is not a practical method for you, please call or otherwise contact me about your observation.

If validation doesn't seem to be helping the situation, the next best thing is to lump observations of the two gray treefrog species together into one species. I'd rather not do that, though, so please do your best. Cope's gray treefrog data will be omitted from this year's data summaries until I can decide what to do with existing data.

## Wood Frog Madness



I have received many comments and/or phone calls concerning wood frogs and how to know when to start surveys in the spring. This is the trickiest part of doing frog surveys, as has been discussed in past Updates.

Wood frogs are distributed over the entire state, and are usually the first species to call in the spring. They are thought to be very abundant in the state, but our surveys are not showing a high number of observations. **Please remember, the temperatures that are written on your data sheets and in the instructions are not written in stone.** As each observer gains experience running surveys in their area, they should know when the best times to survey are, even without looking at a thermometer. I still need you to record the temperatures in which you're surveying, though.

The best advice I can give you is to be aware of the sounds in the spring, when things begin to warm up. When you hear wood frogs calling, don't wait any more than a couple of days before doing your first survey. The same rule applies if you hear other early-callers such as spring peepers, in case

you don't happen to have wood frogs in your immediate area.

### **More Frog Disappearances**



A recent article in The Washington Post discusses studies investigating frog species disappearances. A study in Costa Rica investigated the disappearance of 20 species of frogs. The cause of this decline is thought to be a parasitic fungus that impairs breathing through the skin. The fungus is also considered to be the cause of declines in Australia and Central America.

In California, frog declines were documented in the Sierra Nevada Mountains. The declines occurred on the western slopes of the mountains – the side facing California's heavily agricultural central valley. It is believed that atmospherically transported pesticides are a likely cause of the declines.

In Canada, scientists are distressed to discover that the leopard frog has completely disappeared from British Columbia. It is believed that there are 10 more species in decline throughout the country.

One scientist spoke about the comparison that is made between amphibians and the canaries that once warned coal miners of danger. The comparison isn't quite right, explained the researcher, "if a canary died, the miners got out of the mine. We don't have that option. We don't have any place to go."

### **Midwest Declining Amphibian Conference**

About 300 people attended the conference in Milwaukee, WI on March 20-21, 1998. There were 42 papers presented (including one from the Michigan Survey coordinator), and a panel discussion on amphibian deformities. Topics included survey and monitoring reports, population biology and ecology, and malformity causes and statistics. Abstracts are available through the Great Lakes Declining Amphibians web site at: <http://www.mpm.edu/collect/vertzo/herp/Daptf/daptf.html>.

### **E-Mail List**



I have an opportunity to initiate an e-mail listserv for Michigan Frog and Toad Survey participants and other interested parties. An e-mail listserv is a group e-mailing service to which you can subscribe. Notes that you or others would send to the listserver would then be sent out to everyone on the list and vice versa, you would receive all the notes that others would send.

This is an excellent opportunity to be in touch with other observers and get questions answered and concerns addressed – quickly!

The listserv would be established on a computer server at the NAAMP (North American Amphibian Monitoring Program) offices in Maryland. However, to make it worth their while NAAMP needs to know if there is enough interest in Michigan for this, so I need to know how many of you with e-mail are interested and think this would be helpful and/or interesting. Please contact me ASAP by phone, mail, fax, or e-mail if you would want this to happen (contact info included at end of this update). I hope you do, because it would not only be interesting to me, it would help me keep in better touch with all of you.

### **Herp Atlas**

Many of you may have been excited to hear about the proposed salamander surveys. Well, you should be more excited about the proposed herp atlas. I would like to initiate a Michigan Herp Atlas to include observations of all reptiles and amphibians across the state. This type of project has been done for Michigan birds, but not for herps, and several other states have herp atlases completed or are in the works. We will be having our first brainstorming session the first week of December to discuss the hows and whys of undertaking such an ambitious project.

The atlas will basically include information and distribution of reptiles and amphibians across the state. Data collection will be accepted from anyone but all data will be verified in some way. The project will probably take at least 5-7 years to complete. It will serve as an excellent source of information about Michigan's native populations and, hopefully, draw attention to the plight of some of the disappearing species. Please let me know if you would like to be involved and how. More detailed information will be available at a later date. All active Survey participants will automatically receive the information.



### **Michigan Frog and Toad Survey Web Page**

To better provide information to participants, a web page has been established on the DNR Wildlife Division website. When you visit, you will see a pond with four cartoon frogs, each with a zone number on their chest. Each frog will either have a smile or a frown. If you click on the frog, you will go to a page that summarizes predicted

weather conditions for that zone for the following week. The associated frog's expression will coincide with predicted weather conditions (i.e. smile if good frog-surveying weather is predicted, vice versa for a frown). Along with a weather summary, there will be notes about what other natural occurrences are happening at that time in that zone, for example, "forsythia is blooming."

This should help with planning when to go out on a survey. Keep in mind, though, these are general summaries. If you think you have the proper weather conditions and your frog has a frown, by all means, GO OUT!



Also, for the other natural occurrence information, I need your help. I cannot be everywhere at once, so I need your e-mail reports about what's growing, blooming, drying up, flooding, freezing, snowing, etc. Please e-mail with reports as often as you are able. Eventually, participants can coincide calls with other events.

#### Another Reminder

The instructions provided on establishing and running survey routes are written so that each survey is done in such a way to minimize the amount of bias. Bias results when sites are chosen or abandoned on the basis of frog presence or absence. Scientific survey design requires sampling sites to be random relative to factors that are being measured. Sites cannot be changed because there are not frogs calling or because there are not many species calling. Even if the habitat at a site is changed drastically, it should not be abandoned. Presumably these sites are going to show decline or, at least, a change in the variety of species. This is the kind of data we want.

**This is not a contest to see how many frogs we can find or how many different species we can find.** This is a survey to see who's where and approximate abundance of the different species on a given day under given weather conditions. We can choose our day according to weather conditions only because the use of abundance indices are based on reporting peak calling abundances and this gives us a better chance of being present when a species is calling at their peak abundance.

So, please, remember the **only** reasons to change a site is because hearing the frogs is difficult or access to the site is impossible. We need consistent data for many, many years before any comments can be made about population trends. That means the same observers surveying the same sites year after year after year after...

### Regional Coordinators

Listed below are the regional coordinators, the dedicated people who have volunteered to help observers with any problem or question you might have. They are local contacts that may be able to help with verification of an unusual call or questions about the survey itself.

#### Zone 1 -

Mark July (Eastern half) - (313) 475-3834  
Kathleen Evans (Western half.) - (616) 788-3380

#### Zone 2

Ed Pike - (517) 734-4018

#### Zone 3

Dennis Gorsuch - (906) 632-4942

#### Zone 4

Walt Summers & Phyllis Carlson - (906) 774-5868

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TOTAL NUMBER OF COPIES PRINTED:.....700  
TOTAL COST: .....\$18.90  
COST PER COPY: .....\$0.027  
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