### FINAL REPORT

# Wildlife Preservation Fund Grant #07-022W Lake Forest Open Lands - Herpitology Inventory of Skokie River Nature Preserve

Grant Agreement Number:

#07-022W

Grantee Name, Address, Telephone Number:

Lake Forest Open Lands Association

272 East Deerpath, Suite 318

Lake Forest, IL 60045 847-234-3880 ext. 16

Time frame of report:

July 1, 2006 – Dec 30, 2007

Contact Person:

Loren P. Dixon Associate Director ldixon@lfola.org

**Project Objective:** 

To determine the species of amphibians and reptiles living at the Skokie River Nature Preserve, a 123-acre preserve

owned by Lake Forest Open Lands Association.

**Project Description:** 

Lake Forest Open Lands hired Tom Anton a herpetologist to conduct an in-depth survey of the hepitology living at the Skokie River Nature Preserve. Tom supervised and trained a group of volunteers which included LFOLA staff, volunteers and two high school students. Approximately 30 search days and 100 hours of field hours were required. Survey techniques included the following:

- Visual searches in conjunction with dip netting.
- Cover sampling and minnow, turtle and crayfish trapping.
- Auditory surveys for frog calling.
- Corrugated tin sheets and cover boards placed to survey snakes.
- All captured species were released.

Summary of Project Accomplishments:

See attached Faunal Inventory

Report

### FINAL REPORT

# Wildlife Preservation Fund Grant #07-022W Lake Forest Open Lands - Herpitology Inventory of Skokie River Nature Preserve Page 2

Total Project Expenditures: See attached Account Quick Report from our internal

Quick Books system for details.

Supplies:

\$730.06

Herpitogist Survey Fee:

\$1,500.00

**Total Project Cost** 

\$2,330.06

Cost incurred by IDNR:

\$2,000.00

Cost incurred by LFOLA:

\$330.06

Other Attachments:

Local press coverage of project.

# Faunal Inventory of the Skokie River Preserve, Lake County, Illinois 2007 Results

# Report to:

# Lake Forest Open Lands Association

By:

Thomas G. Anton
The Ecological Consulting Group
800 Oak St. #3B
Winnetka, IL 60093

TomAnton@comcast.net



Northern Leopard Frog, Rana pipiens, Skokie River Preserve, Lake County, 2007. Photo by Sarah Condic

### Introduction

Faunal inventories of lands owned and managed by Lake Forest Open lands Association (herein LFOLA) was initiated in 2007 in partnership with the Principal Investigator (TGA) for the purpose of a baseline inventory and preliminary recommendations for management based on the results of faunal composition of the Skokie River Preserve to date. Another goal of the project was the training of staff and volunteers-which is considered of paramount importance in managing lands owned by non-profit organizations, and serves as a springboard for further participation in region-wide conservation programs.

This project focused on a specific group of aquatic macroinvertebrates, decaped crustaceans known as crayfish, due to their critical role as keystone species in aquatic ecosystems and as critical factors in symbiotic relationships with other taxa (i.e., crayfish burrows providing hibernation sites for amphibians and reptiles, etc), and on amphibians and reptiles, which are susceptible to isolation due to road construction, habitat alteration and destruction and resulting loss of genetic variability suggested to be a factor in the decline in some populations in the Chicago region.

### Methods

Crayfish and amphibian surveys: Fifteen aluminum mesh minnow traps (42 x 17.5 cm and 84.5 x 17.5 cm) were deployed in 3 ponds of varying sizes: a small, temporary pond, a large, semi-permanent to permanent pond, and a medium sized, permanent pond. Trapping duration was 31 days (March 28-April 28) and totaled approximately 745 trap hours. Cover object (CO) surveys used 15 plywood boards (2'x 4') placed in the prairie restoration area from 28 March to 31 May that were checked twice a week for a total of 12 CO check-days in the evenings to detect snakes sleeping beneath them. A single excursion to seine the Skokie River was conducted on 23 June in which 200 meters of the Skokie River were seined for 1.25h to collected stream crayfishes and native fish.

### Results

Five species of decapod crustaceans (crayfishes, family Cambaridae), representing 45% of the entire crayfish fauna of the Chicago Wilderness Ecoregion (Page, 1985) were found at Skokie River Preserve in minnow trapping surveys of 3 wetlands and during seining survey of the Skokie River. These include Cambarus diogenes, Orconectes immunis, Orconectes virilis, Procambarus acutus and Procambarus gracilis. One native mussel, the giant floater (Anodonta grandis) and 2 species of fish (white sucker-catostomus commersonii; fathead minnow-Pimephales promelas) were collected by Seine in the Skokie River. Five species of amphibians and reptiles were documented to occur on the property: American toad (Bufo americanus), Chorus frog (Pseudacris triseriata), northern leopard frog (Rana pipiens) and common garter snake (Thamnophis sirtalis). Brief accounts of the most significant forms are included below, and a summary is provided in Table 1. Sample data sheets for the minnow trapping survey are included as addenda after Figures 1 & 2.

### Crayfishes:

Cambarus diogenes, the devil crayfish, is a seldom observed species that spends the majority of its life in deep burrows. I juvenile male was taken in a minnow trap in the large semi-permanent pond. It is seldom observed and its presence is often overlooked. It is predominantly a carnivore that frequently preys on other crayfishes.

Procambarus acutus, the White River or red crayfish, was found only in the large semipermanent pond, but probably also occurs in the Skokie River. Two juveniles were taken in minnow traps on 28 April. This is an abundant species in the Chicago region and occupies a variety of wetland types. It has a high dispersal capability and its abundance in individual wetlands may vary from year to year.

Procambarus gracilis, the prairie or grassland crayfish was the most frequently encountered species during the minnow trapping surveys in terms of relative abundance (Figure 1). Burrows believed to be constructed by this species were found in large numbers in the meadow and P. gracilis is an abundant crayfish on the site. Age/size class and reproductive status of individuals trapped in April are shown in Figure 2. This crayfish was found to be more widespread and occupying more habitat types than previously believed (Taylor and Anton, 1999).

Crayfish species not found during the 2007 survey but may occur on site:

Fallicambarus fodiens, the digger crayfish, inhabits forested vernal ponds dominated by sedges (Carex sp.) and may have been overlooked. It is a secretive, small burrowing species and is often detected after two or more field seasons of survey work in some locations where populations are widely scattered, as in Lake County (Taylor and Anton, 1999). Minnow traps are the best method for detecting this species.

### Amphibians and Reptiles:

Salamanders (Caudata):

Two species of salamanders were documented to occur on the site or observed by LFOLA staff prior to this survey, both in the family Ambystomatidae (mole salamanders). Ambystoma laterale, the blue-spotted salamander, was found at the medium sized permanent pond; three adults were taken in minnow traps; this pond is the presumed breeding site for this species. The larger, but seldom seen and very secretive tiger salamander (Ambystoma tigrinum) was not found during the survey but was reliably reported to occur at Skokie River Preserve and other preserves in the area.

### Frogs and toads (Anura):

Northern leopard frog (Rana pipiens). This frog is considered the poster-amphibian for malformations and declines in the Midwestern U.S. Populations may fluctuate widely in the Chicago region and experience cycles of low or high actual numbers (or visibility). In 2007 this frog was found in all wetlands at Skokie River Preserve, with as many as 12 individuals being found in one minnow trap on several occasions. Adults were heard calling and egg masses were found in April. Over 35 adults were counted during the survey.

Common garter snake (*Thamnophis sirtalis*). This abundant (Anton, 1999) successful snake was the only snake species encountered at Skokie River Preserve in 2007. It feeds on high biomass prey (earthworms, fish frogs) and has large litters of young (42 were recorded from a female in Cook County). Its ability to wander great distances (Rossman, et al., 1996) and occupy disturbed, semi-urban habitats may be a factor in allowing this snake to colonize the preserve from corridors along the railroad right-of-way, bike trail, or the Skokie River. 39 individuals were counted during the cover object (CO) survey. A population of over 115 individuals was estimated, but actual numbers cannot be accurately determined.

Species of possible occurrence

Bullfrog (Rana catesbeiana). This large frog is a native species, but is an aggressive colonizer and has been introduced in many areas the region (Harding, 1997; Anton, 1999). The small size and isolated mostly ephemeral nature of the wetlands at the preserve may have slowed the arrival of this species to the preserve, but it must be watched for, particularly along the Skokie River. It does occur at Middlefork Savanna, and may occur at other LFOLA-managed property.

Smooth green snake (Opheodrys vernalis). This small, secretive well-camouflaged snake is the only insectivorous species in the region (Phillips, et al., 1999; Smith, 1961). They are known from Middlefork Savanna by museum records, and can persist in oldfield, prairie remnant and railroad/powerline ROWs. Cover Object (CO) surveys did not detect this snake at Skokie River Preserve this year, but it may have been overlooked due to low number, or has not yet colonized the preserve from adjacent habitats.

Brown snake (Storeria dekayi) and red-bellied snake (S. occipitomaculata). Both species are small, secretive and feed on earthworms and slugs (Phillips, et al., 1999; Smith, 1961). Brown snakes may be abundant from locality to locality, but red bellied snakes are often localized and uncommon. Both snakes are species of open woodland, savanna and forest, and are often easily overlooked during surveys, in many cases being the last species documented on a given site. Neither species was found in 2007 at the preserve; however, as for the smooth green snake, they may have gone undetected or have not yet colonized the site from railroad or bike path margins.

Snapping turtle (Chelydra serpentina). This large aquatic turtle was not found during the survey, but its presence is all but assured either as transient individual(s) or a small number of residents inhabiting the Skokie River or golf course wetlands. Juveniles hatched from nests deposited at golf course sand traps may access the temporary or permanent wetlands on the site, or the Skokie River. Its broad ecological tolerances enable it to colonize or transition through a variety of aquatic habitats of varying water quality. Painted turtles (Chrysemys picta) are not presumed to occur on this preserve due to the lack of suitable habitat-the small size and mostly temporary nature of the wetlands. However, an individual may find its way up the Skokie River riparian corridor as a waif from another more remote locality.

Acknowledgements

The principal investigator extends his sincerest thanks to all who made this project possible: Lake Forest Open Lands Association for funding and logistical support; and a first rate field crew comprising: Jeremy Batson, Nathan Coleman, Sarah Condic, Lauren Dixon (and the Dixon's!), Glen Kalin, Jill Landau, Karen Lewis, and Kate Sackman.

### Literature Cited

- Anton, T.G. 1999. Current status and distribution of amphibians and reptiles in Cook County, Illinois. Trans. Illinois State Acad. Sci. 92(3-4): 211-232.
- Harding, J.H. 1997. Amphibians and Reptiles of the Great Lakes Region. University of Michigan Press, Ann Arbor.
- Page, L.M. 1985. The crayfishes and shrimps (Decapoda) of Illinois. Illinois Natural History Survey Bulletin 33(4): 335-448.
- Phillips, C.A., R.A. Brandon, and E.O. Moll. Field Guide to Amphibians and Reptiles Of Illinois. Illinois Natural History Survey Manual 8.
- Rossman, D.A., N.B. Ford, and R.A. Seigel. 1996. The Garter Snakes: Evolution and Ecology. The University of Oklahoma Press, Norman.
- Smith, P.W. 1961. The amphibians and reptiles of Illinois. Illinois Natural History Survey Bulletin 28(1): 1-298.
- Taylor, C.A. and T.G. Anton. 1999. Distributional and ecological notes on some of Illinois' burrowing crayfishes. Trans. Illinois State Acad. Sci. 92 (1-2): 137-145.
- Taylor, C.A. and J.K. Tucker, 2005. New distributional records for Illinois crayfishes (Decapoda: Cambaridae) with comments on the continued spread of non-native species. Trans. Illinois State Acad. Sci. 98(1-2): 75-80.

# Suggestions for Further Reading

- Kingsbury, B. and J. Gibson. 2002. Habitat management guidelines for amphibians and Reptiles of the Midwest. Partners in Amphibian and Reptile Conservation Technical Publication HMG-1. 56p.
- Johnson, E.A., and M.W. Klemmens. 2005. Nature in Fragments: The Legacy of Sprawl. Columbia University Press, New York.
- Pilz, D., H.L. Ballard, and E.T. Jones. 2006. Broadening participation in biological monitoring: handbook for scientists and managers. Tech. Rep. PNW-GTR-680.
   Portland, OR: U.S. Department of Agriculture, Forest Service, Pacific Northwest Research Station 131p.

Table 1. Crustaceans (Crayfishes), Amphibians and Reptiles Found at Skokie River Preserve, 2007.

Common Name	Scientific Name	Number observed	Habitat(s)/notes
Anodonta grandis	Giant Floater	2	Large freshwater mussel found in Skokie River in seine pull.
Catostomus commersonii	White Sucker	3	Taken during seine excursion of 23 June.
Pimephales promelas	Fathead Minnow	9	Taken during seine excursion of 23 June.
Cambarus diogenes	Devil Crayfish	1	From large semi-permanent pond only to date; secretive species.
Orconectes immunis	Calico Crayfish	31+	From large, semi-permanent pond (n=1), & Skokie River (n=30+).
Orconectes virilis	Northern crayfish	75+	Skokie River only (stream species).
Procambarus acutus	White River Crayfish	5	Found only in one pond; adults and juveniles in minnow traps
Procambarus gracilis.	Prairie Crayfish	77	Found in all 3 wetlands surveyed; see Figures 1 & 2.
Ambystoma laterale	Blue-spotted salamander	3	All adults taken in minnow traps in Pond 3.
Bufo americanus	American Toad	3	All adults on site; chorus heard calling at golf course.
Pseudacris triseriata	Chorus Frog	7	Numerous more heard calling 25 April.
Rana pipiens	Northern Leopard Frog	35	Egg masses in Pond 3, 12 taken in 1 minnow trap.
Thamnophis sirtalis	Common Garter Snake	39	All in prairie under COs; 3 random encounters, 1 adult found on 28
			March, totaling 19 males, 14 females; 6 juveniles.

# Figure 1. Crayfish Community Composition Pond 2, **April 2007**



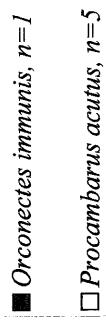
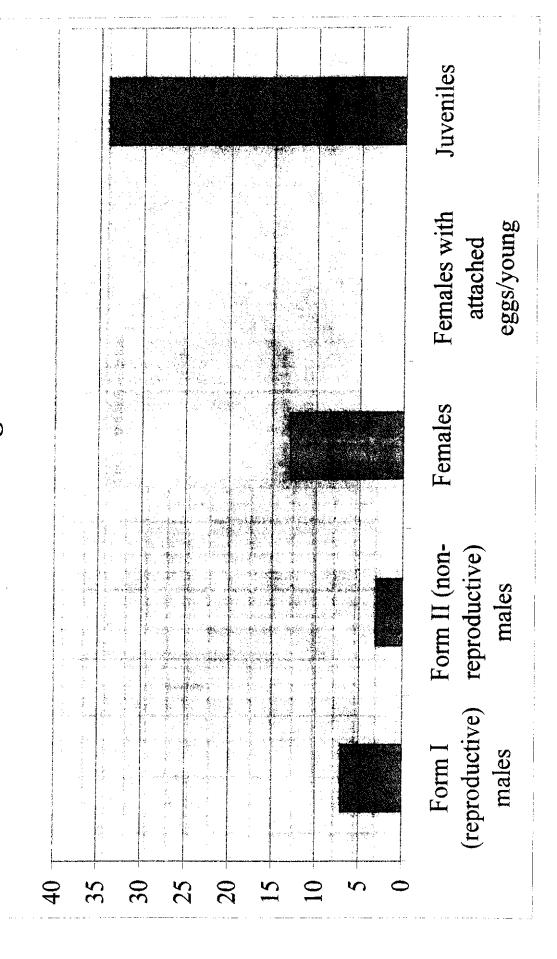




Figure 2. April 2007 Population Structure of Procambarus gracilis



Skokie River Preserve Amphibian and Crayfish Inventory, 2007.

Date: 3/28/07 12.5 C, lt. rain; T. Anton, J. Batson, L. Mills; 1830-1925 hrs.

Fond1(2)   Male   Male   Remide   Fem/Ova Fem/AY Juv Amphibians/Notes   Foldogenes   Fondamens   Fon	Si		Fem/Ova	
\$ 3	ogenes diens			•
\$ 3	diens			
\$ 3				
\$ 3	cutus			
\$ 5 5 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6				
35 37 38 39 30 30 31 31 32 33 34 35 36 37 38 38 38 38 38 38 38 38 38 38	mmunis			
35 5 5 6 7 8 9 9 1 1 1 1 2 2 3 3 4 4 1 1 1 2 3 3 3 3 3 3 3 3 3 4 4 4 4 4 5 6 7 8 8 8 8 8 8 8 8 8 8 8 8 8	irilis			
3 5 5 6 7 8 9 1 1 1 2 1 2 3 4 4 4 1 1 2 2 3	Orusticus			
\$ 4 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	Pond2 (9)			I male Rana pipiens in trap
\$ 4 4 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	liogenes			
\$ 4 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	Ffodiens			Γ-
\$ 4 1 1 1 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	cutus			
\$ 3 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5	racilis	4		
5 5 1 2 7	mmunis			
55 55 57 58 11 58	irilis			
35 1 1 2 2 2 5 3	usticus			
\$ 2 \$ 1 \$ 2	nd3 (3)			12 Rana pipiens in 1 trap
\$	iogenes			
8	diens			
	catus			<b>T</b>
nmunis irilis usticus	racilis 1			2
irilis usticus	nmunis			
usticus	irilis			
	usticus			

Skokie River Preserve Amphibian and Crayfish Inventory, 2007.

Date: 4/1/07 12.4 C, lt. rain; T. Anton, G. Kalin, K. Sackn

; 1400-1508 hrs.
K. Sackman; 1
ton, G. Kalin, K. Sacku
. rain; T. Anton,
, It. rain
12.4 C, It.
4/1/07

Pond1(2)	Male I	Male II	Female	Fem/Ova	Fem/AY	Juv /	Male I   Male II   Female   Fem/Ova   Fem/AY   Juv   Amphibians/Notes
Cdiogenes							
Ffodiens							
Pacutus							
Pgracilis			2				
Oimmunis							
Ovirilis							
Orusticus							
Pond2 (9)							3 Pseudacris triseriata in traps
Cdiogenes							
Ffodiens							
Pacutus							
<b>Pgracilis</b>							
Oimmunis							
Ovirilis							
Orusticus							
Pond3 (3)							5 Rana pipiens in 1 trap
Cdiogenes							1 Ambystoma laterale in 1 trap
Ffodiens							
Pacutus							
Pgracilis	1					1	
Oimmunis							
Ovirilis							
Orusticus							

Skokie River Preserve Amphibian and Crayfish Inventory, 2007.

Date: 4/4/07

33 F. partly cloudy; T.Anton, S.Condic, J.Bats

}[		33 r, par	riy cioud	y; 1.Anto	n, S.Cond	lic, J.1	33 f., partly cloudy; 1. Anton, S. Condic, J. Batson, K. Lewis, N. Coleman; 1830-1910 hrs.
	Male I	Male II	Female	Male I Male II Female Fem/Ova Fem/AY	Fem/AY	Juv	Amphibians/Notes
Si							
Ffodiens							
Pacutus							
Pgracilis	1		1				
Oimmunis							
Ovirilis							
Orusticus							
Pond2 (9)							1 Rana pipiens in trap
Cdiogenes							
Ffodiens							
Pacutus							
Pgracilis		1					
Oimmunis							
Ovirilis							
Orusticus							
Pond3 (3)							4 Rana pipiens egg masses in pond
Cdiogenes							}
Ffodiens							
Pacutus							
Pgracilis							
Oimmunis							
Ovirilis							
Orusticus							

Skokie River Preserve Amphibian and Crayfish Inventory, 2007.

10 F. overeast: T. Anton. S. Condie, V. I. overeast: T. Anton. S. Condie, V. I. overeast

30 F, overcast; I. Anton, S. Condic, K. Lewis, N. Coleman; 1500-1600 hrs.	Male II Female Fem/Ova Fem/AY Juv Amphibians/Notes	No crayfish	
K. Le	<b>Anf</b>		
Condic, 1	Fem/AY		
Anton, S.	Fem/Ova		
ercast, I.	Female		
50 F, 0V	Male II		
	Male I		
Date: 4/ //0/	Pond1(2)	Cdiogenes	Tree diame

Skokie River Preserve Amphibian and Crayfish Inventory, 2007. Date: 4/11/07 35 F, rain; T. Anton, K. Pasulka, S. Condic. No Call

Date: 4/11/0/		SO E, FRI	n; I. An	on, N. Pa	ulka, S. C	ondi	33 F, Fain; I. Anton, K. Pasulka, S. Condic. No Captures (all traps empty)
Pond1(2)	Male I	Male I   Male II   Female   Fem/	Female	Fem/Ova	Ova Fem/AY	Juv	Amphibians/Notes
Cdiogenes							
Ffodiens							
Pacutus							
<b>Pgracilis</b>							
Oimmunis							
Ovirilis							
Orusticus							
Pond2 (9)							
Cdiogenes							
Ffodiens							7
Pacutus							
Pgracilis							•
Oimmunis							
Ovirilis							
Orusticus							
Pond3 (3)							
Cdiogenes							
Ffodiens							
Pacutus							
<b>Pgracilis</b>							
Oimmunis							
Ovirilis							
Orusticus							

Skokie River Preserve Amphibian and Crayfish Inventory, 2007.

Ffodiens Pacutus Pacutus Pacutus Ovirilis Orusticus Ffodiens Pacutus Ovirilis Ovirilis Ovirilis Orusticus Pacutus Pacutus Pacutus Pacutus Pacutus Pacutus Orusticus Pacutus Pacutus Orusticus	Male II	Female 1	Fem/Ova	Fem/AY	Juv   -   -	Male II Remale Fem/Ova Fem/AV Juv Amphibians/Notes  1 adult female Pseudacris triseriata in trap  1 1   1   1   1   1   1   1   1   1
Ovirilis						
Ornetione						

Skokie River Preserve Amphibian and Crayfish Inventory, 2007.

Date: 4/18/07	7	52 F, ov	vercast; T.	Anton, S.	n, S. Condic, J. Batso	Bats	52 F, overcast; T. Anton, S. Condic, J. Batson, K. Sackman, 1830-1915 hrs.
Pond1(2)	Male I	Male II	Female	Male II Female Fem/Ova Fem/AY Juv	Fem/AY	Juv	Amphibians/Notes
Cdiogenes						7.—	
Ffodiens						į	
Pacutus							
<b>Pgracilis</b>							
Oimmunis							
Ovirilis							
Orusticus							
Pond2 (9)							P. gracilis remains (chela, carapace) on trail
Cdiogenes							
Ffodiens							
Pacutus							
<b>Pgracilis</b>			1				
Oimmunis							
Ovirilis							
Orusticus							
Pond3 (3)							i adult female Ambystoma laterale in trap
Cdiogenes							
Ffodiens							
Pacutus							
Pgracilis							
Oimmunis							
Ovirilis							
Orusticus							
		Ì					

Skokie River Preserve Amphibian and Crayfish Inventory, 2007.

Date: 4/22/07

79 F, sun; T. Anton, S. Condic, N. Coleman, 1430-1512 h.

Male I	Female	Fem/Ova	Fem/AY J	Male II Female Fem/Ova Fem/AY Juv Amphibians/Notes
es s s s s s s s s s s s s s s s s s s				J. D
Ffodiens Pacutus Pgracilis Oimmunis Ovirilis Crusticus Pgodenes Ffodiens Pacutus Pacutus Oimmunis Ovirilis Ovirilis Ovirilis				13 Kana niniens in trans
Pacutus Pgracilis Oimmunis Ovirilis Orusticus Cdiogenes Ffodiens Pacutus Oimmunis Ovirilis Orusticus				State in the state of the state
Pgracilis Oimmunis Ovirilis Orusticus Pond2 (9) Cdiogenes Ffodiens Pacutus Pacutus Oimmunis Ovirilis Orusticus				
Oimmunis Ovirilis Orusticus Pond2 (9) Cdiogenes Ffodiens Pacutus Pacutus Oimmunis Ovirilis Orusticus				
Ovirilis Orusticus Pond2 (9) Cdiogenes Ffodiens Pacutus Paracilis Oimmunis Ovirilis Orusticus				
Pond2 (9)Pond2 (9)CdiogenesFfodiensPacutusPacutusOimmunisOvirilisOrusticus				
Pond2 (9)CdiogenesFfodiensPacutusParacilisOimmunisOvirilisOrusticus				
Cdiogenes Ffodiens Pacutus Pacutus Oimmunis Ovirilis Orusticus				3 Rana piniens in trons
Ffodiens Pacutus Pgracilis 1 Oimmunis Ovirilis Orusticus				Pseudacris triseriata calling
Pacutus Pgracilis 1 Oimmunis Ovirilis Orusticus				
Pgracilis 1  Oimmunis Ovirilis Orusticus				
Oimmunis Ovirilis Orusticus	1			
Ovirilis Orusticus				
Orusticus				
Pond3 (3)		<del>  "</del> -		3 Pseudacris triseriata ohserved
Cdiogenes				
Ffodiens				T
Pacutus	<del> </del>			
Pgracilis				T
Oimmunis				Ţ
Ovirilis				
Orusticus				T

Skokie River Preserve Amphibian and Crayfish Inventory, 2007.

Date: 4/25/07 45F, overcast, It rain. T. Anton, S. Condic. K.

T. Anton, S. Condic, K. Sackman. 1830-1915 hrs.	Amphibians/Notes								I Rana pipiens in trap	First capture of Cambarus diogenes and Orconectes immunis in wetland 2							1 Ambystoma laterale and 1 Rana pipiens in trap							
ndic, I	Juv				12					-														
n, S. Co	/Ova Fem/AY Juv																							
	Fem/Ova F																							
cast, It r	Female 1																				1			
45F, overcast, It rain.	Male II				1 small									1										
	Male I Male II Female Fem																				1			
Date: 4/25/07	Pond1(2)	Cdiogenes	Ffodiens	Pacutus	<b>Pgracilis</b>	Oimmunis	Ovirilis	Orusticus	Pond2 (9)	Cdiogenes	Ffodiens	Pacutus	<b>Pgracilis</b>	Oimmunis	Ovirilis	Orusticus	Pond3 (3)	Cdiogenes	Ffodiens	Pacutus	<b>Pgracilis</b>	Oimmunis	Ovirilis	Orusticus

Skokie River Preserve Amphibian and Crayfish Inventory, 2007.

							Orusticus
							Ovirilis
							Oimmunis
	12						Pgracilis
							Pacutus
							Ffodiens
,							Cdiogenes
5 Rana pipiens observed							Pond3 (3)
							Orusticus
							Ovirilis
							Oimmunis
	-						Pgracilis
	ω						Pacutus
							Ffodiens
							Cdiogenes
							Pond2 (9)
							Orusticus
							Ovirilis
							Oimmunis
	S.					1	Pgracilis
							Pacutus
							Ffodiens
							Cdiogenes
Amphibians/Notes	Juv	Fem/AY	Female Fem/Ova Fem/AY	Female	Male I   Male II	Male I	Pond1(2)
70F, sun; T. Anton, N. Coleman, K. Lewis. 1500-1545 hrs.	Lewis.	man, K. l	n, N. Cole	T. Anto	70F, sun;		Date: 4/28/07
•	0 7 100				•		