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Current Status of Amphibians and Reptiles in DuPage County, Illinois

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ABSTRACT

The relative abundance and distribution of amphibians and reptiles was surveyed in 50 preserves within the Forest Preserve District of DuPage County, Illinois and at a number of other natural areas remaining in DuPage County from 1987 through 1991. Loss of habitat and introduction of non-native species have contributed to changes in community composition, distribution, and relative abundance of the DuPage County herpetofauna. Forty-one species (17 amphibians, 24 reptiles) are known or suspected to occur in DuPage County.

1) Thirteen amphibian and nineteen reptile species were found to be extant in DuPage County, Illinois.
2) Because of restricted occurrence, or low numbers of individuals found during surveys, 19 species (48.7%) are now considered rare or uncommon. Eight (19.5%) widely distributed species usually found in numbers, are fairly common or common. Four species (9.8%) are considered abundant.
3) Nine species located during surveys were not reported from DuPage County by Smith (1961).
4) Five of the 12 turtles (9 species, 12 subspecies), or 41.7% of the turtle fauna found during our surveys are believed to be introduced.
5) Five species reported previously from DuPage County were not located during surveys.
6) Four amphibian and reptile species not found prior to, or during surveys, are considered to be of possible occurrence in DuPage County.

INTRODUCTION

DuPage County (546 km^2) located in northeastern Illinois, has a temperate climate. The eastern border of the county is located approximately 24 km west of downtown Chicago. White settlement began in DuPage County during 1832 and by 1857 the county was claimed for settlement and transformed into an agrarian county of about 9,000 people (Lampa, 1984). A population of nearly 782,000 occupied this rapidly urbanizing county by 1990.

DuPage County exhibits only marginal variation in topography. Seven major moraines transect the county from north to south. These moraines were formed as the remnants of the Wisconsin Glacier receded in an easterly direction, toward the bed of what is currently Lake Michigan, over 10,000 years ago. In the wake of this recession, glacial till formed moraines, upland forest developed on the ridges, river valleys formed, and the surrounding lands were flooded with glacial meltwater (Kimmel and Lampa, 1984).

DuPage County is drained by seven watersheds. Most of the major rivers and their tributaries are bordered by thin forest edge or savanna. With the exception of the Sawmill Creek and lower Des Plaines River watersheds in southeast DuPage County, and small portions of the West Branch of the DuPage River Valley, the banks of most DuPage County streams exhibit little relief. Surrounding areas are very prone to occasional flooding.

It is estimated that over 50% of DuPage County was covered by marshes or other wetlands in presettlement times (Lampa and Ludwig, 1991). These areas were bordered by wet and wet-mesic sedge meadow, which gently graded to mesic prairie. Wooded areas, including forests and savanna, consisted mainly of large and small groves, and bands of trees along sections of the county's river banks.

Few remnants of prairie still occur in DuPage County. Agricultural practices and drainage of wetlands eliminated much of the county's open habitats during the 1800's and early 1900's. Suppression of fire, beginning with early settlers, allowed invasion by numerous European plants and development of dense stands of shrubby vegetation. Resultant old field and shrubland habitats are now the predominant open habitat types in DuPage County. Seven woodland communities currently exist in DuPage County: dry-mesic upland forest; mesic upland forest; wet upland forest, or flatwoods; wet-mesic bottomland forest; wet bottomland (floodplain) forest; mesic savanna; and pine plantation.

Several works on the distribution of amphibians and reptiles of the Chicago area included pre-1980 DuPage County records (Necker, 1939; Pope, 1944; Stille and Edgren, 1948). Smith (1961) provided records of 25 species for DuPage County, and considered the ranges of 13 others to include all or portions of the county. Cebula (1981a,b), Cebula and Redmer (1988), Cochran (1988; 1989b), Jessup (1981), Mierzwa (1987), Redmer (1987a; 1988), Redmer and Zaworski (1987), Young (1973a,b), and Young and Vandeventer (1987) reported on the natural history of some amphibian and reptile species occurring in DuPage County. Several inventories of DuPage County amphibians and reptiles of limited durations or areas are also available (Cochran, 1989a; Mierzwa, et al., 1990; Redmer, 1987b). This report summarizes the findings of these recent works, our own three year study (Ludwig, et al., 1990), and records gathered during 1991. This information and specific locality and habitat data are incorporated into the natural resources data bank of the Forest Preserve District of DuPage County.

METHODS AND MATERIALS

Amphibians and reptiles were surveyed from March through September 1988 and 1989, and May though September, 1990 and 1991 within 50 preserves within the Forest Preserve District of DuPage County. Some areas not owned by the Forest Preserve District were also surveyed. A variety of surveys and capture methods were used to inventory, as completely as possible, the species present within individual forest preserves. Some areas adjacent to preserves or containing interesting natural areas were also sampled.

Drift fences were constructed of 36 cm x 15 m sheets of 0.02 gauge aluminum flashing inserted into the soil in trenches (5 to 10 cm deep) and stapled to 60 cm wood stakes. Drift fence arrays consisted of single fences (15 to 60 m in length) placed along habitat borders (e.g., along the shorelines of ponds or marshes) to intercept animals migrating or wandering between these areas. Pitfall and funnel traps were placed along drift fences during the appropriate season to capture specific species. Pitfall taps are most effective for capturing amphibians and funnel traps are the most reliable way to capture snakes (Karns, 1986). Pitfall traps were 20 liter plastic buckets buried with the opening of the bucket flush with the ground. Buckets were placed at each end of a drift fence and alternately along both sides of the drift fence. The intervals between traps along a fence varied from approximately 3.9 to 12 m. Funnel traps were constructed by stapling the lip of 15 cm diameter plastic funnels (with spout removed) to the edge of aluminum window screening rolled to form a cylinder. The cylinder was stapled length-wise along the seam, and the end opposite the funnel secured with metal binder clips. Single funnel traps were positioned on each side and at the ends along 15 m sections of drift fences with entrances pointed away from the ends of the fence.

Frog populations were inventoried and censused by evening call censuses. An observer familiar with the calls of each native frog species listened for male vocalizations at potential breeding sites for 5 to 10 minutes. Selected localities within preserves were visited at least one week per month from March through June 1988, and from 21 through 28 May, 1989, and 29 through 30 May, 1990. Surveys occurred during all portions of the 1988 breeding season in order to sample all possible frog species (Karns, 1986).

Larval amphibians and small aquatic turtles were sampled by seining stretches of open water along weedy edges or blind dip netting in aquatic vegetation. Random sampling techniques used during the entire study included search and seize, cover turning, road cruising at night, spotting scope surveys (for aquatic turtles), turtle nesting area surveys, and salvage.

Historical records represented by museum specimens from the following institutions were examined: Chicago Academy of Sciences (CA), Field Museum of Natural History (FMNH), and Illinois Natural History Survey (INHS). Localities on specimen tags and catalog entries were visited to verify continued existence of uncommon or rare species.

RESULTS

Species Frequency
Thirteen amphibian and 19 reptile species were found in 50 DuPage County forest preserves (Table 1). During the 1988-1991 surveys rare species were defined as those located at 5 or fewer preserves (≤ 10.0%). Uncommon species were those located in from 6 to 10 preserves (12.0 to 20.0%). Fairly common species were located in 11 to 15 preserves (22.0 to 30.0%). Common species were found in 16 to 20 preserves (32.0 to 40.0%). Abundant species were those located in 21 or more preserves (≥ 42.0%).

Local abundances and county-wide distributions varied among species. The green frog (*Rana clamitans melanota*), Blanding's turtle (*Emydoidea blandingii*), and midland brown snake (*Storeria dekayi wrightorum*) had fairly widespread distributions but were usually found only in low numbers, even in appropriate habitat and under ideal conditions. Species such as the common map turtle (*Graptemys geographica*) and northern water snake (*Nerodia sipedon*) had restricted distributions but were abundant at certain locations.

Amphibians
Blue-spotted salamander, *Ambystoma laterale*. This rare species was found around two vernal ponds in an oak flatwoods near Wood Dale, and in a disturbed woodland in Burr Ridge. Jessup (1981; pers. comm., 1989) reported that this species may be extirpated at other DuPage County localities in Burr Ridge.

Spotted salamander, *Ambystoma maculatum*. Although this species is known historically from the Wood Dale area (Pope, 1944; Smith, 1961; based on a museum specimen CA 6947), it was not found in the northeastern corner of DuPage County during this study. In 1988 and 1989 a few animals were found in a mesic forest in the southeast corner of the county.

Eastern tiger salamander, *Ambystoma tigrinum tigrinum*. This species was found in 16 preserves and is the most common and widespread salamander in DuPage County. It occurs in a variety of habitats, and is apparently tolerant of some habitat disturbance.

Central newt, *Notopthalmus viridescens louisianensis*. This rare species was confined to forests within four preserves in the eastern half of DuPage County. Both aquatic stages (adults and larvae) and the terrestrial eft stage were collected at each locality where the species occurred. The ecology and behavior of *N. viridescens louisianensis* in the Wood Dale area were reported by Cochran (1988, 1989a).

Mudpuppy, *Necturus maculosus*. The only specimen found during this survey was seen in a drainage channel flowing into the Des Plaines River in the southeast corner of the county. Many museum specimens were collected along the West Branch of the DuPage River in Naperville during the1940's.

Eastern American toad, *Bufo americanus americanus*. This was the most widespread and abundant amphibian during this study. It was located within 36 preserves and on several non-Forest Preserve District properties.

Western chorus frog, *Pseudacris triseriata triseriata*. This common species was collected or heard calling at 18 preserves and in a variety of aquatic habitats.

Northern spring peeper, *Pseudacris crucifer*. This rare DuPage County frog was located in four preserves. A specimen was collected and others were heard calling in a wooded portion of Wood Dale Grove Forest Preserve during 1988 (Redmer, 1990). *Pseudacris crucifer* was also heard during frog calling censuses at Waterfall Glen Forest Preserve and around three woodland ponds between Lisle and Glen Ellyn where its occurrence previously was reported by Cebula (1981b). Another small chorus was heard in 1990 near the Cook-DuPage County line in Lemont, but a breeding pond was not located. Only small numbers of frogs were heard calling at each site.

Eastern gray treefrog, *Hyla versicolor*. Two species of morphologically similar gray treefrogs known to occur in Illinois (Brown and Brown, 1972), can only be reliably distinguished by their calls, which differ in trill rate, or by karyotypical analyses. The eastern gray treefrog is tetraplod, and Cope's gray treefrog (*Hyla chrysoscelis*) is diploid. While Cebula (1981b) reported the "gray treefrog" from Mallard Lake, the first verification of *H. versicolor* in DuPage County occurred during this study. The identity of the gray treefrogs located at one southeast DuPage County locality site was confirmed by sonographic analysis of recorded calls. Two populations of treefrogs were located at non-district sites. These populations have not yet been positively identified. Both are tentatively believed to be *H. versicolor* based on field observations of breeding vocalizations.

Bullfrog, *Rana catesbeiana*. The bullfrog was abundant throughout most of DuPage County and was found at 35 preserves. The largest numbers were heard during the frog calling censuses in 1988 and 1989 along marshes, large ponds, lakes and other areas with permanent water.

Green frog, *Rana clamitans melanota*. Although found at 16 preserves, this species is only locally common within certain portions of these preserves. The green frog was most abundant in weedy sections of small streams or ponds with grassy banks.

Northern leopard frog, *Rana pipiens*. This species was widespread, but populations were often localized within small areas of forest preserves. Adults were found sporadically during spring either calling from or inhabiting areas near ponds. Numerous recently metamorphosed juveniles were captured in funnel traps set in marshy areas or wet meadows in summer (usually late June to early July).

Wood frog, *Rana sylvatica*. Several individuals were heard calling at one location near Wood Dale in late March, 1988. Repeated attempts to capture a specimen were unsuccessful.

Reptiles

Common snapping turtle, *Chelydra serpentina*. Snapping turtles were located at 20 preserves during this survey and were common in a wide variety of aquatic habitats, including streams of all sizes, lakes, quarry ponds, marshes, and small ditches.

Stinkpot, *Sternotherus odoratus*. Two dead specimens (one juvenile, one adult) and one live male were collected at Waterfall Glen Forest Preserve. This species was also reported from Waterfall Glen by Walchuck (1975). This turtle was erroneously reported from Hinsdale in DuPage County by Necker (1939; cited by Smith, 1961) based on museum specimens FMNH 29387 and 29388. These specimens were actually collected in McHenry County. Prior to this study, the only valid DuPage County records of this species were based on two museum specimens (FMNH 29162 and INHS 10763) from the Springbrook drainage in Addison and Bloomingdale townships.

Blanding's turtle, *Emydoidea blandingii*. This uncommon species was located in 8 preserves and three off-district property sites. It was most common in a series of marshes in the western one-fourth of DuPage County.

Box turtles, *Terrapene carolina* and *Terrapene ornata*. Several forms of the two North American box turtle species are commonly offered for sale in local pet shops. Single specimens (presumed to be former pets) of the three-toed box turtle, *Terrapene carolina triunguis*, were collected during surveys at Warrenville Grove and Pratt's Wayne Woods Forest Preserves. Box turtles of both species have also been captured previously in the county and brought to Willowbrook Wildlife Haven Forest Preserve, a wildlife rehabilitation center.

Common map turtle, *Graptemys geographica*. This species was observed at five preserves and was abundant in the DuPage County portion of the Des Plaines River. While Smith (1961) considered this species to be statewide in Illinois, no DuPage County records were known. The nearest known populations of (*G. geographica*) were reported from Cook, Lake, and Grundy counties (Cahn, 1937; Stille and Edgren, 1948; Smith, 1961). Dancik (1974) reported this species and several non-native and exotic species from the Des Plaines River in Cook County.

False map turtle and Mississippi map turtle, *Graptemys pseudogeographica - G. kohnii* species complex. Populations of *Graptemys pseudogeographica* were reported from northern Illinois (Cahn, 1937) and were considered to occur statewide (Smith, 1961). However, Conant and Collins (1991) reduced the Illinois distribution of *G. pseudogeographica* on the species' range map. Populations in DuPage County are believed to be introduced. Individuals belonging to three forms of this species complex were found at three localities. The Mississippi map turtle (*G. kohnii*) was located at Warrenville Grove Forest Preserve and in northeastern Bloomingdale township. Many individuals of the Oachita map turtle (*G. pseudogeographica oachitensis*) were also observed at the Bloomingdale location. Two adult false map turtles, *G. p. pseudogeograpica*, were observed at Churchill Woods Forest Preserve during 1991.

Painted turtle, *Chrysemys picta*. This was the most widespread and abundant reptile observed (26 preserves). Large populations were found in marshes and quarry ponds. Smaller numbers were found in rivers and streams in quiet backwaters or slow sections. This species is frequently killed on roads in DuPage County during the nesting season (spring and early summer).

Red-eared slider, *Trachemys scripta elegans*. This species was located at 10 preserves during this study. Most animals were found within heavily used preserves. All DuPage County populations are likely the result of introductions. There is evidence of breeding (hatchlings and adults present) at three forest preserves. This large turtle was reported by Cahn (1937) to occur in Cook and Kankakee counties. However, it has been introduced and is breeding in so many areas extralimital to its range that it will be difficult to determine its natural range in northern Illinois.

Eastern spiny softshell turtle, *Apalone spinifera spinifera*. This species was found at 17 preserves and was common in the Des Plaines River and in the East and West Branches of the DuPage River. It was also found in marshes or quarry ponds immediately adjacent to rivers or creeks.

Smooth green snake, *Opheodrys vernalis*. This small insectivorous snake was found in five preserves. It is also known to occur at Fermi National Laboratory (Mierzwa, et al., 1990). John Cebula (pers. comm.) received several second-hand reports of smooth green snakes from lots and small prairie remnants near West Chicago, north of Roosevelt Road and west of Route 59. This species occurs in fair numbers throughout the northwestern portion of DuPage County where wet-mesic sedge meadows, mesic prairies, and undisturbed old-fields still exist.

Western fox snake, *Elaphe vulpina vulpina*. This species was found in 14 preserves. It occurs in a variety of open habitats, including grassy margins of railroad beds, prairie remnants and old field, forest edge and savanna, and around hay bales, old buildings, barns, and or other places inhabited by rodents. Young and Vandeventer (1987) reported on aggregating behavior and reproduction of this species in DuPage County.

Eastern milk snake, *Lampropeltis triangulum triangulum*. This uncommon species was located at six preserves within old field or prairie areas immediately adjacent to tracts of mature woods or oak savanna. The areas where this species was most commonly encountered were all close to foundations of raised buildings. Building foundations may provide important foraging, nesting, and hibernating sites.

Eastern plains garter snake, *Thamnophis radix radix*. This prairie species was located within 14 preserves. The largest number of individuals were found in grassy or marshy areas and vacant lots. It also occurred in old fields where the invading shrubby vegetation was still sparse or had not yet shaded out the grasses and forbs. Populations have declined dramatically and even disappeared from several DuPage County fields where the species was abundant in the early 1980's (M. Redmer, pers. obs.).

Eastern garter snake, *Thamnophis sirtalis sirtalis*. This was the most common and widespread snake found during this study. Although located at only 23 preserves during this study, it probably occurs county-wide. The eastern garter snake was usually found in moist areas in and around marshes, ponds, ditches or rivers, especially near shrubby or wooded areas.

Midland brown, or DeKay's snake, *Storeria dekayi wrightorum*. During our 1988 through 1990 survey, this small snake was found at ten preserves. It is uncommon throughout most of DuPage County. It was difficult to consistently locate more than a few animals even when hiding places beneath ground cover were available. Animals were not found at two preserves where they occurred in recent years (Redmer, 1987b). All of the known DuPage County *S. dekayi* localities are adjacent to areas of oak savanna, mesic forest, or riparian woodlands.

Northern redbelly snake, *Storeria occipitomaculata occipitomaculata*. This small snake is rare in DuPage County. It was found only in two preserves in the northeastern portion of DuPage County. This species was known historically from the forested area around Wood Dale (Smith, 1961; Cochran, 1989a). Two DuPage County specimens (INHS

5403 and 5404) from Fullersburg Woods are in the Illinois Natural History Survey Collection. Smith (1961) pointed out that *S. occipitomaculata* were uncommon throughout Illinois except in the forested morainal areas of Cook and Lake counties. Many of the geologic and vegetational features of those areas are also evident in northeastern DuPage County (Kimmel, 1985; Kimmel and Lampa, 1984).

Queen snake, *Regina septemvittata*. This rare species was found at several small quarry ponds and along Sawmill Creek in the southeast corner of the county, and two preserves along the West Branch of the DuPage River. This snake feeds almost exclusively on crayfishes, although a DuPage County specimen regurgitated a partially digested fish.

Northern water snake, *Nerodia sipedon sipedon*. An aggressive aquatic snake, this species was found at two preserves along the Des Plaines River Valley and in seven preserves in the watershed of the West Branch of the DuPage River. It was frequently found along short sections of the West Branch of he DuPage River, especially near bridge pilings and stone dams which may be used as hibernacula, and throughout much of Waterfall Glen Forest Preserve. *Nerodia sipedon* is apparently absent from the East Branch of the DuPage River and other suitable habitat in DuPage County. This species is considered uncommon because of its limited distribution in the county.

Species Not Encountered

Blanchard's cricket frog, *Acris crepitans blanchardi*. This small frog was probably common throughout all of DuPage County until recent years, when it inexplicably disappeared from much of northern Illinois. Pentecost and Vogt (1976) reported declines in cricket frog populations in Wisconsin in the mid 1970's; it is now recognized as endangered in that state (Vogt, 1981). Smith (1961) called Blanchard's cricket frog the most common amphibian in Illinois and plotted two DuPage County records on the range map for the species. Mierzwa (1989) summarized the known history of this species' decline in northern Illinois.

Cope's gray treefrog, *Hyla chrysoscelis*. Refer to the eastern gray treefrog account given above for an explanation of the taxonomy of the gray treefrog complex. Currently, the population closest to DuPage County is from St. Charles in Kane County (M. Redmer, unpublished data).

Plains leopard frog, *Rana blairi*. The species is native to the midwestern United States, but because it is a relatively recently described species (Mecham, et al., 1973), the entire range of the plains leopard frog has not been determined. The localities closest to DuPage County are near Wilmington and Crete, Will County, and the Palos Hills area, Cook County (Mierzwa, 1988; pers. comm; Brown and Morris, 1990).

Pickerel frog, *Rana palustris*. Smith (1961) showed this species' Illinois range to include the western half of DuPage County. There is no evidence that this species has ever occurred in DuPage County. The specimen from Batavia, Kane County, reported by Stille and Edgren (1948) and cited by Smith (1961) is actually a misidentified northern leopard frog (Redmer and Mierzwa, in review). Two previously unreported Kane County specimens from near Dundee represent the localities closest to DuPage County.

Spotted turtle, *Clemmys guttata*. This species is endangered in Illinois (Illinois Endangered Species Protection Board, 1990; Morris and Smith, 1981). The Illinois range of this species given by Smith (1961) is the Des Plaines River drainage in Cook and Will counties. The species was believed to be extinct in Illinois since the 1950's but was rediscovered in Will County (Stone, 1980; Morris and Smith, 1981). While extensive tracts of suitable habitat exist along the Des Plaines River flood-plain in DuPage County, intensive searches or Spotted Turtles in 1989 and 1990 were unsuccessful.

Eastern yellowbelly racer, *Coluber constrictor flaviventris*. A single specimen (FMNH 41221) was taken at 31st Street and York Road in the 1940's. This species has not been found since and is believed extinct in DuPage County.

Kirtland's snake, *Clonophis kirtlandii*. This small snake is very rare and is currently being considered for listing as a federally threatened species (Dodd, et al., 1985). A specimen from Hinsdale is in the Field Museum of Natural History collection. Another was found dead on the road in Addison during 1986 (M. Redmer, pers. obs.) but was not preserved. Robert Young (pers. comm.), reported this species from Warrenville Grove Forest Preserve, though repeated attempts to locate it there during this study were unsuccessful. Fred Janzen (pers comm.) collected a specimen within Argonne National Laboratory, near the northwest portion of Waterfall Glen Forest Preserve during 1989.

Graham's crayfish snake, *Regina grahamii*. This water snake was reported from two DuPage County localities by Young (1973a). The areas reported by Young were later disturbed, and snakes were not found there after the early 1970's (R.A. Young, pers. comm.). Repeated attempts to find Graham's crayfish snakes during this study at localities reported by Young were unsuccessful.

Eastern massasauga, *Sistrurus catenatus catenatus*. Smith (1961) presumed this species was probably common in Illinois before intensive cultivation and drainage of prairie marshes. Pope (1944) mentioned the continued existence of this small rattlesnake in the 1940's in the Wood Dale area, one of the few remaining localities in the Chicago region where the species occurred at that time. The Wood Dale area has been extensively developed and little habitat remains for this species. It was not found during our surveys and may now be extinct in DuPage County

DISCUSSION

All habitat types in DuPage County have been reduced in area, fragmented, and isolated. These alterations are especially detrimental to populations of relatively immobile amphibians and reptiles. Much of the pre-settlement wetland, prairie, savanna, and oak forest habitats in DuPage County have been drained, converted to agricultural crops, cut for lumber, and subdivided for commercial and residential development. Breeding ponds have dried up or otherwise been negatively affected by changes in drainage patterns and to the water table (Lampa and Ludwig, 1990).

Potential exists for additional records of all DuPage County amphibians and reptiles. This survey located species now considered "rare" or "uncommon" within the few remaining tracts of suitable habitat for these restricted animals. The county-wide distributions of these species is not expected to expand considerably in the future. Most remaining populations of "rare" or "uncommon" species are located within the Forest Preserve District of DuPage County. A number of preserves that were recently acquired, or which contain "poor" habitats, were not surveyed as intensively as preserves with potential for rare or uncommon species. These preserves may lack current records of common and abundant species. Several species (e.g., *Bufo americanus*, *Thamnophis sirtalis*) can be presumed to occur in nearly all undeveloped open space in DuPage County.

Five species known historically from DuPage County were not located during this study. There is evidence that one of these species (*Clonophis kirtlandii*) still occurs in the county. Decline and probable extinctions of the other four species apparently occurred since the 1940's; however, this is poorly documented.

Morris et al. (1983) reported a general decline in all amphibians and reptiles in Illinois. One of us (M. Redmer) has noted declines in *Rana clamitans melanota* and *Thamnophis radix* at some DuPage County localities.

The large percentage of introduced turtles is a further sign of human manipulation of DuPage County's herpetofauna. Of 19 turtle taxa reported by Dancik (1974), 13 were not native to the Des Plaines River in Cook County. *Graptemys kohnii* and *Terrapene carolina* were certainly introduced in DuPage County. There is strong evidence to suggest that the presence of *Graptemys p. pseudogeographica*, *G. p. oachitensis*, and *Trachemys scripta elegans* in DuPage County is also due to introduction, although some authors consider the ranges of these turtles to include or closely approach DuPage County.

Uncertainty exists about current population sizes of rare and uncommon species and current population trends of all amphibian and reptile species in DuPage County. Data acquired during this study has been incorporated into the database of the Forest Preserve District of DuPage County. This data will be used in developing guidelines for management of these animals in the remaining DuPage County habitats (Ludwig, et al., 1990).

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TABLE 1. FREQUENCY OF OCCURRENCE (%) AND STATUS OF AMPHIBIAN AND REPTILE SPECIES IN FIFTY DUPAGE COUNTY FOREST PRESERVES (1988–1991).

SPECIES	FREQUENCY OF OCCURRENCE	NUMBER OF PRESERVES	STATUS
AMPHIBIANS			
AMBYSTOMA LATERALE	2	1	RARE
AMBYSTOMA MACULATUM	2	1	RARE
AMBYSTOMA T. TIGRINUM	32	16	COMMON
NOTOPTHALMUS VIRIDESCENS LOUISIANENSIS	6	3	RARE
NECTURUS MACULOSUS	2	1	RARE
BUFO A. AMERICANUS	72	36	ABUNDANT
PSEUDACRIS TRISERIATA	36	18	COMMON
PSEUDACRIS CRUCIFER	8	4	RARE
HYLA VERSICOLOR	2	1	RARE
RANA CATESBEIANA	70	35	ABUNDANT
RANA CLAMITANS MELANOTA	36	18	COMMON
RANA PIPIENS	32	16	COMMON
RANA SYLVATICA	2	1	RARE
REPTILES			
CHELYDRA SERPENTINA	40	20	COMMON
STERNOTHERUS ODORATUS	2	1	RARE
EMYDOIDEA BLANDINGII	16	8	UNCOMMON
TERRAPENE CAROLINA TRIUNGUIS *	4	2	RARE
CHRYSEMYS PICTA SSP.	52	26	ABUNDANT
TRACHEMYS SCRIPTA ELEGANS *	20	10	UNCOMMON
GRAPTEMYS GEOGRAPHICA	10	5	RARE
GRAPTEMYS PSEUDOGEOGRAPHICA / G. KOHNII *	4	2	RARE
APALONE S. SPINIFERA	34	17	COMMON
OPHEODRYS VERNALIS	6	5	RARE
ELAPHE VULPINA	28	14	FAIRLY COMMON
LAMPROPELTIS T. TRIANGULUM	12	6	UNCOMMON
THAMNOPHIS RADIX RADIX	30	15	FAIRLY COMMON
THAMNOPHIS S. SIRTALIS	46	23	ABUNDANT
STORERIA DEKAYI WRIGHTORUM	20	10	UNCOMMON
STORERIA O. OCCIPITOMACULATA	4	2	RARE
REGINA SEPTEMVITTATA	6	3	RARE
NERODIA S. SIPEDON	18	9	UNCOMMON

* introduced species