

THE DUPAGE RIVER BASIN

AN INVENTORY OF THE REGION'S RESOURCES



ABOUT THIS REPORT

The DuPage River Basin: An Inventory of the Region's Resources is a product of the Critical Trends Assessment Program (CTAP) and the Ecosystems Program of the Illinois Department of Natural Resources (IDNR). Both are funded largely through Conservation 2000, a State of Illinois program to enhance nature protection and outdoor recreation by reversing the decline of the state's ecosystems.

Conservation 2000 grew out of recommendations from the 1994 CTAP report, *The Changing Illinois Environment*, the 1994 Illinois Conservation Congress, and the 1993 *Water Resources and Land Use Priorities Task Force Report*.

The Critical Trends report analyzed existing environmental, ecological, and economic data to establish baseline conditions from which future changes might be measured. The report concluded that:

- the emission and discharge of regulated pollutants over the past 20 years has declined in Illinois, in some cases dramatically;
- existing data suggest that the condition of natural systems in Illinois is rapidly declining as a result of fragmentation and continued stress;
- data designed to monitor compliance with environmental regulations or the status of individual species are not sufficient to assess ecological health statewide.

The Illinois Conservation Congress and the Water Resources and Land Use Priorities Task Force came to broadly similar conclusions. For example, the Conservation Congress concluded that better stewardship of the state's land and water resources could be achieved by managing them on an ecosystem basis. Traditional management and assessment practices focus primarily on the protection of relatively small tracts of land (usually under public ownership) and the cultivation of single species (usually game animals or rare and endangered plants and animals). However, ecosystems extend beyond the boundaries of the largest parks, nature preserves, and fish and wildlife areas. Unless landscapes are managed on this larger scale, it will prove impossible to preserve, protect, and perpetuate Illinois' richly diverse natural resource base.

Because more than 90% of the state's land area is privately owned, it is plainly impossible for Illinois governments to acquire resources on the ecosystem scale. Therefore, the Task Force and the Congress called for public agencies and private landowners to cooperate in a new approach to natural resource protection and enhancement. If landowners can protect, enhance, or restore precious natural resources through enlightened private management, the need for public acquisition can be reduced.

The Congress and the Task Force agreed that this new approach ought to be:

- organized on a regional scale;
- voluntary and based on incentives;
- guided by comprehensive and comprehensible ecosystem-based scientific information;
- initiated at the grassroots rather than in Springfield.

Finally, the Congress and the Task Force agreed that natural resource protection need not hamper local economic development but can enhance it through tourism and outdoor recreation.

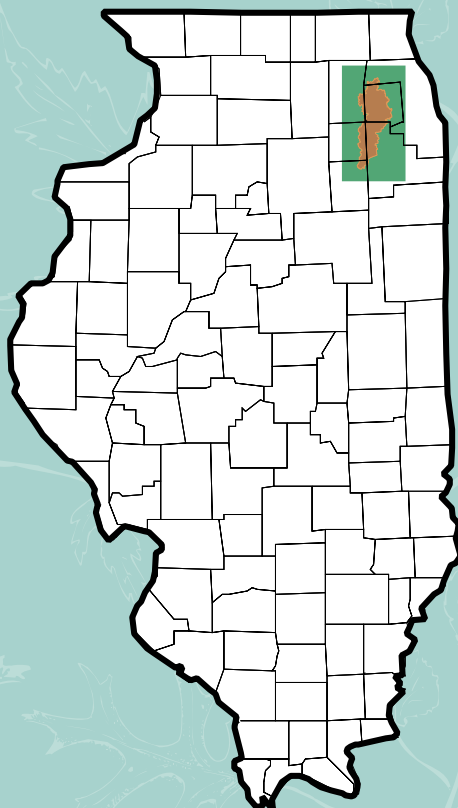
CTAP described the reality of ecosystem decline in Illinois, while the Congress and the Task Force laid out principles for new approaches to reversing that decline. And Conservation 2000, designed to achieve that reversal, has implemented a number of their recommendations by funding several programs, one of which is IDNR's Ecosystems Program. The program redirects existing department activities to support new resource protection initiatives such as Ecosystems Partnerships. These partnerships are coalitions of local and regional interests seeking to maintain and enhance ecological and economic conditions in local landscapes. A typical Ecosystem Partnership project merges natural resource stewardship (usually within a given watershed) with compatible economic and recreational development.

(continued on inside back cover)

A Project of the Critical Trends Assessment Program

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George H. Ryan, Governor
State of Illinois



Brent Manning, Director
Illinois Department of Natural Resources



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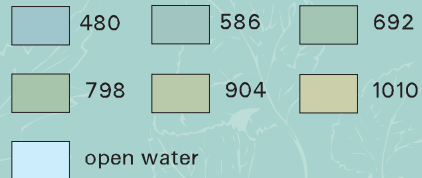
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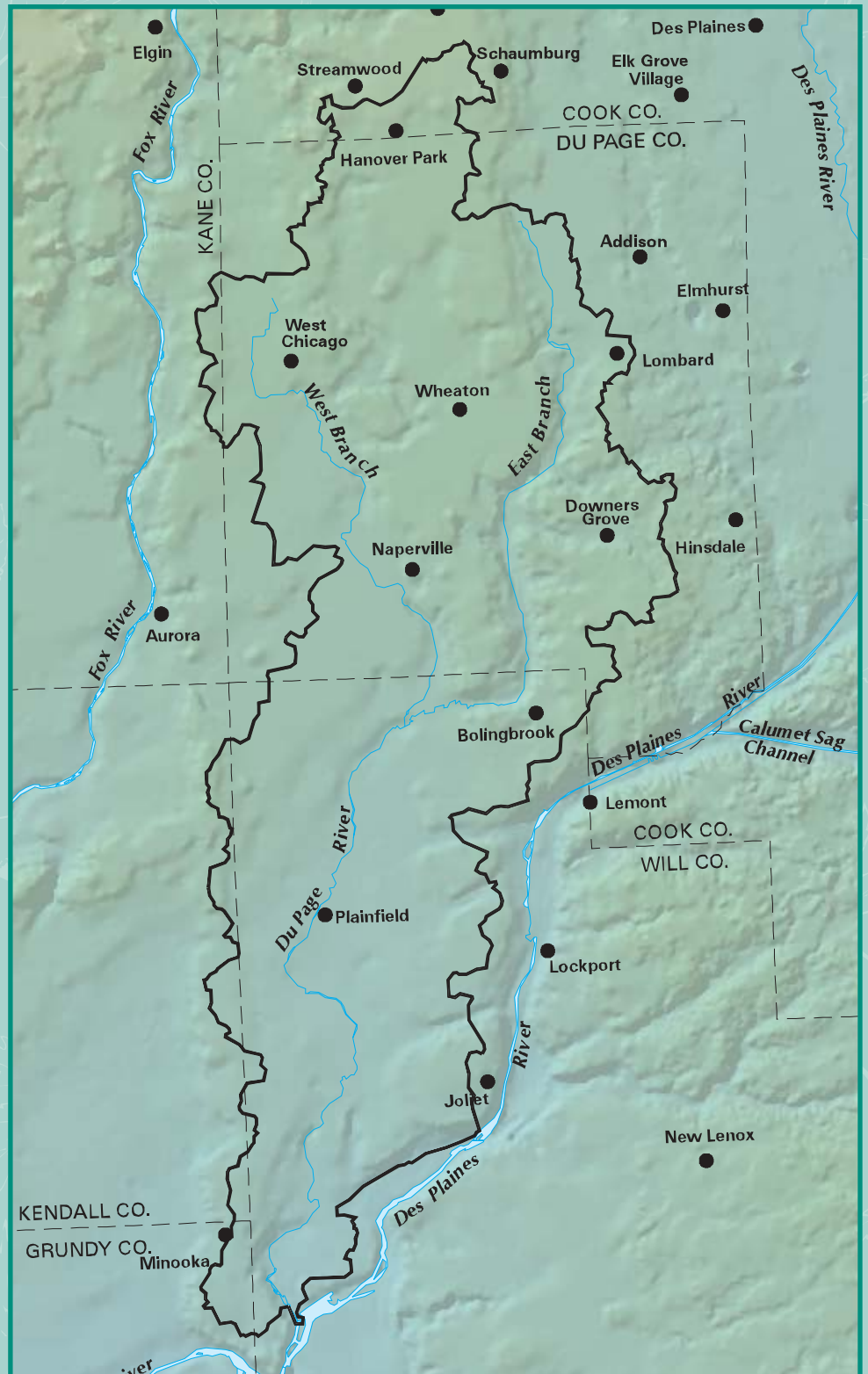
Landforms in the DuPage River Basin



Elevations in feet above mean sea level



- cities and towns
- assessment area boundary
- county boundary
- rivers and streams



Lisa Smith and Chris Goldsmith • Illinois State Geological Survey





James P. Rowan

The DuPage River Basin

An Inventory of the Region's Resources

From its perch on a telephone wire strung over a busy interstate, a kestrel surveys its ever-shrinking domain. Gone are Brushy Grove, Twelve-mile Grove, and Jewel Grove, islands of trees in the vast prairie that was once DuPage and Will County. They have been replaced by towns and developments with tree-like names — Woodridge, Downers Grove, and Elmhurst. Strings of geese crisscross the sky high above the kestrel, bathed in a golden glow from a low winter sun. The numerous flocks of geese seem to mimic the endless lines of telephone wires stretching across the landscape. Yet they go unnoticed by the ever-

watchful kestrel. Suddenly the bird moves, swoops, hovers, drops, and grasps a prairie vole within its talons. Life has changed for the kestrel, but it can still be good.

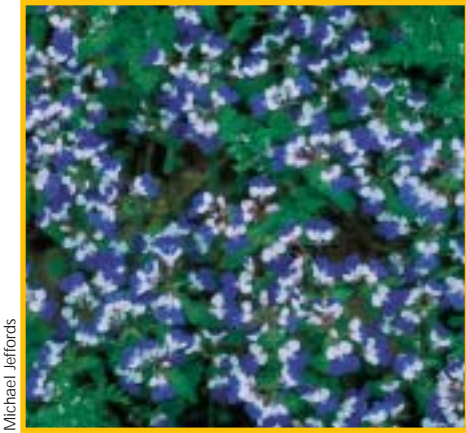
As in the rest of the state, settlement of the DuPage River basin began with the slow emergence of pioneer settlements progressing to self-supporting farm centers. By the mid-twentieth century, however, the similarity stops as the area becomes an almost continuous urban landscape, the result of its proximity to Chicago, one of the largest cities on the earth. Urban development has affected everything from agriculture to archaeology, wildlife to wild areas. Life has changed

for humans too, but, like for the kestrel, it can still be good. Residents are working together to preserve and expand greenspace and wildlife habitat, as well as improve flood control and water quality.

THE SETTING

"DuPage County is generally level, and contains fair proportions of timber and prairie. The soil is well adapted to grazing, and produces abundant crops of all kinds of grain common to this latitude. The DuPage river, which has its rise in the northern part of the county, is skirted with forests of thrifty growing timber."

C. W. Richmond and H. F. Vallette
A History of the County of DuPage, Illinois, 1857



Michael Jeffords

Blue-eyed Mary

The DuPage River watershed encompasses approximately 372 square miles (238,462 acres) in northeast Illinois and includes major portions of DuPage and Will counties, with small portions in Cook, Kane, Kendall, and Grundy counties. The watershed is long and narrow — 47 miles long in the north-south direction and no more than 14 miles wide from east to west — and represents approximately 0.7% of the total surface area of the state.

The basin is one of the most heavily urbanized areas in the state. In 1990 it was home to 10% of Illinois' population. Nearly one-half of the surface area is urban land; statewide, only 5.8% is urban land. And while more than three-fourths of the land is agricultural in the state as a whole, just a little more than one-third is agricultural in the DuPage basin. Most of the land devoted to urban uses is concentrated in the northern half of the area while agricultural land is found in the southern half.

The natural landscape was undulating prairie, with numerous marshy areas and some natural lakes in the depressions where drainage was poor. During the last century, most of the naturally formed lakes and wetlands

were artificially drained. Today wetlands cover 4.5% of the land and are primarily associated with stream corridors and floodplains. The area has 166 lakes with a surface area greater than two acres; most of them are artificial, formed when a stream was impounded or sand and gravel was extracted (many of the latter are located in forest preserves). More than one-tenth of the land is forested.

The Valparaiso Moraine, located in the eastern half of the area, may give the impression that the area has substantial elevation, but most of the land has elevations only in the range of 600 to 700 ft.-msl (above mean sea level), with a high of 970 ft.-msl near Carol Stream in northern DuPage County and a low of 505 ft.-msl at the confluence of the DuPage and Des Plaines Rivers.

The climate is typically continental, with changeable weather and a wide range of temperature extremes. The average first occurrence of 32°F is October 18, and the average last occurrence is April 23. The average annual precipitation is 36.26 inches. The wettest year on record was 1902 (56.11 inches) and the driest was 1963 (21.83 inches).

THE DUPAGE RIVER

"The DuPage River had, from time immemorial, been a stream well known. It took its name from a French trader who settled on this stream below the fork previous to 1800."

Rufus Blanchard
History of DuPage County, Illinois, 1882

The DuPage River was named after a French trapper and trader, Du Pazhe, an agent of the American Fur Company. Between 1780 and 1800 he set up his post at the fork of the two branches of

the river that now bears his name. Here he traded cutlery, gunpowder, trinkets, and cloth to the Potawatomi for bear, deer, and beaver pelts.

The DuPage's headwaters consist of the West Branch and East Branch. The West Branch rises near Hanover Park in northwestern Cook County while the East Branch rises one and one-half miles southeast of Bloomingdale in DuPage County; both are fed by copious springs. The two branches flow generally north to south and join just south of the Will-DuPage County Line. The river continues southward for an additional 28 miles until it discharges into the Des Plaines River near Channahon (Potawatomi for "meeting of the waters"). Nestled among the bluffs of the two rivers, Channahon was considered one of the "beauties of the country." The total length of the DuPage, including its length along the West Branch, is 63 miles. It varies in width from eight feet to 157 feet.

Small natural lakes used to be interspersed throughout the region and swampland was found near the watercourses. Most of these were drained within the last century. Because much of the area has relatively poor natural drainage, many of the stream reaches have been channelized (about 51% in DuPage County). Even so, the East Branch is considered a resource-rich area because of the woodlands and wetlands in the county forest preserves and in The Morton Arboretum.

GEOLOGY

" . . . the only remaining outcrops of rock in DuPage county, are met with on the western fork of the DuPage river, at Naperville and below. At Naperville, in the quarries on the southwestern bank of the creek, just below the milldam, there is a section, consisting at

the base, of an even textured, regularly bedded, light drab or buff limestone, about six feet of which is exposed in the excavation. Nodules of chert, of irregular flattened forms, are quite frequent in the upper part of this bed, but less abundant below where the layers also appear to be thicker and more adapted for a building stone."

Henry M. Bannister

The Geology of DeKalb, Kane and DuPage Counties,
1870 (Worthen Report)

This is a young land. Between 22,000 and 14,000 years ago, the Pleistocene glaciers flowed west and south across the area from the basin that now holds Lake Michigan. Meltwater rivers flowing along several of the last glacier fronts — which formed farther and farther to the east as the glaciation waned — cut large south-trending stream valleys. Lakes and bogs were common features in this recently glaciated terrain. They occurred in depressions left in the drift by flowing or melting glaciers and collected deposits of sand, fine mud, and peat. These features were usually short lived as generations of water plants filled them with peat, erosion filled them with mud from the surrounding land, and stream erosion cut channels through the sides of their basins and drained them.

Most of these features have disappeared. Processes associated with the Wisconsin glacial episode formed the present landscape features, both the uplands and the lowlands. In the uplands are the glacier-built moraines, where the edge of the ice temporarily remained in one place. The Valparaiso Moraine, located in the eastern half of the basin, is the dominant physiographic feature. The lowlands include the areas along the stream valleys and similar areas of alluvial deposits. Because of

the brief time since the last glacier melted 13,000 years ago, the area has undergone little erosion and the shape of the landscape remains largely unchanged.

The Sandwich Fault Zone, a major structural feature composed of mostly high-angle faults, trends northward across the southern tip of the area. At the fault zone, the strata on the southwest side are upthrown by hundreds of feet relative to the northeast side. This up-throw brings older rocks such as shale to the bedrock surface.

Across most of the area, deposits of glacial drift — layers of clay, gravel, and gravelly mud — cover Silurian dolomite. The dolomite is rock comprised of layers of shells and chalky muds that accumulated on the bottom of the warm sea that covered the Midwest more than 400 million years ago. The dolomite thickens toward the east, with a range of less than 50 feet on the west side to as much as 250 feet on the east. The dolomite and its closely related rock, limestone, remain important mineral commodities. In 1997, eight quarries were producing dolomite for the construction industry in the Chicago metropolitan area.

Historically this dolomite formation has also been an important source of groundwater. In northeast Illinois, bedrock aquifers are comprised of either sandstone or dolomite. Of the three principal bedrock aquifers found here, the Silurian dolomite aquifer is the shallowest and has been used extensively for domestic, municipal, and industrial purposes. During the 1970s, 35 million gallons of water per day were pumped from wells penetrating water-filled, open crack and crevice networks in the rock. By 1979, however, most municipalities had convert-

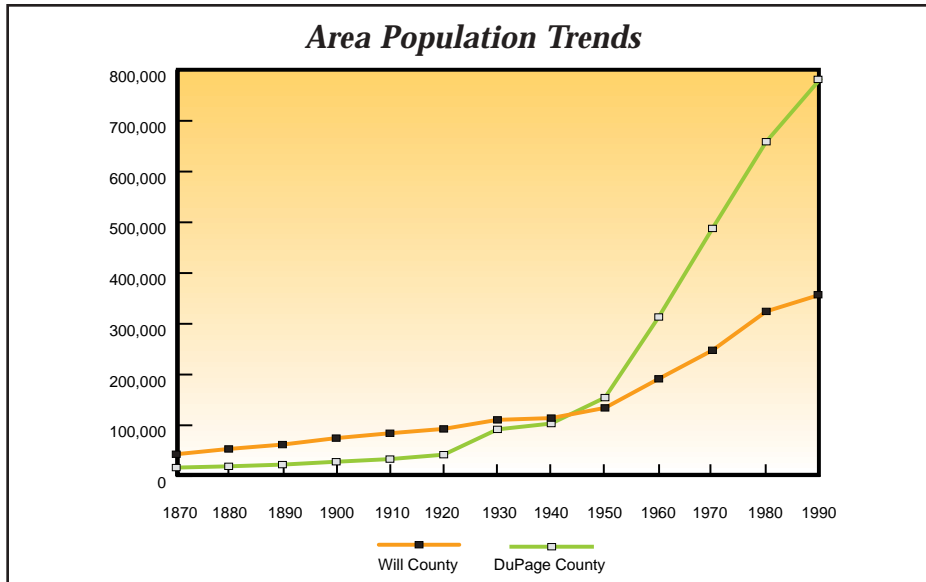
The Area at a Glance

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ed from groundwater supplies to Lake Michigan water.

ARCHAEOLOGY

“... his tusks [mastodon] were ten feet in length, ten inches in diameter at the base and weighed 200 pounds. These are the dimensions and weight of a pair of them found near Aurora a few years ago, while excavating for the Chicago, Burlington & Quincy Railroad. Later in the fall of 1869, the bones of one fore leg, sixteen sections of vertebrae, shoulder-blade and hip-bone of this extinct species were found on the land of Mr. Horace Jane, two miles from Wheaton.”

Rufus Blanchard

History of DuPage County, Illinois, 1882

During the waning stages of the Ice Age, the first Native Americans began to arrive in Illinois. Settlement first occurred along rivers and streams, including the DuPage River. The archaeological database indicates that the region was continuously occupied during the last 10,000 years, in spite of major changes in both social and physical environments. A total of 740 archaeological sites have been record-

ed in the DuPage River area, ranging from the Paleo-Indian period (10,000 BC) through the Historic Postwar period (AD 1946). The majority of the sites are concentrated along the DuPage River and in the central portion of the watershed.

Archaeologists have conducted a comparatively large amount of work in the area, but much of the recent work has been undertaken to comply with Federal and State laws that require survey — or even excavation — of sites affected by development and construction. Other sites have been discovered by accident. For example, in 1981 three teenagers crawled into a cave located under the floor joists of a house in DuPage County. There the teenagers found stew bones, a stone marble (later identified as either American Indian or African), a boot from the Civil War era, an old bone button, a brass safety pin, and a hand-made machinery piece that might have been part of a pulley. After a curator from the Northern Illinois Anthropology Museum identified the items and did a preliminary dating, he postulated that the house had been part

of an Underground Railroad station in DuPage County (see *The Underground Railroad sidebar*).

HUMAN RESOURCES

“One of the special features of DuPage County is the location in it of some of the most beautiful suburbs in the country. Wealthy men, engaged in business in Chicago, have recognized the desirability of establishing homes away from the stress and bustle of a great city, and have spared neither expense nor pains to develop the localities they have selected for their seat of operation. As a result, Hinsdale, Glen Ellyn, Elmhurst, Naperville . . .”

Amos Churchill, 1913

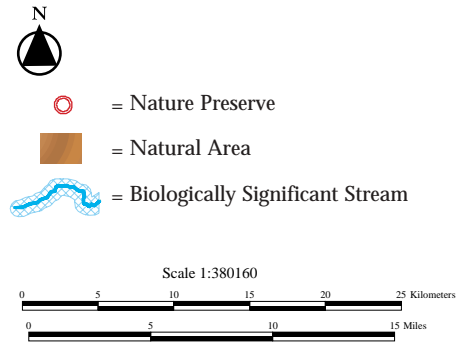
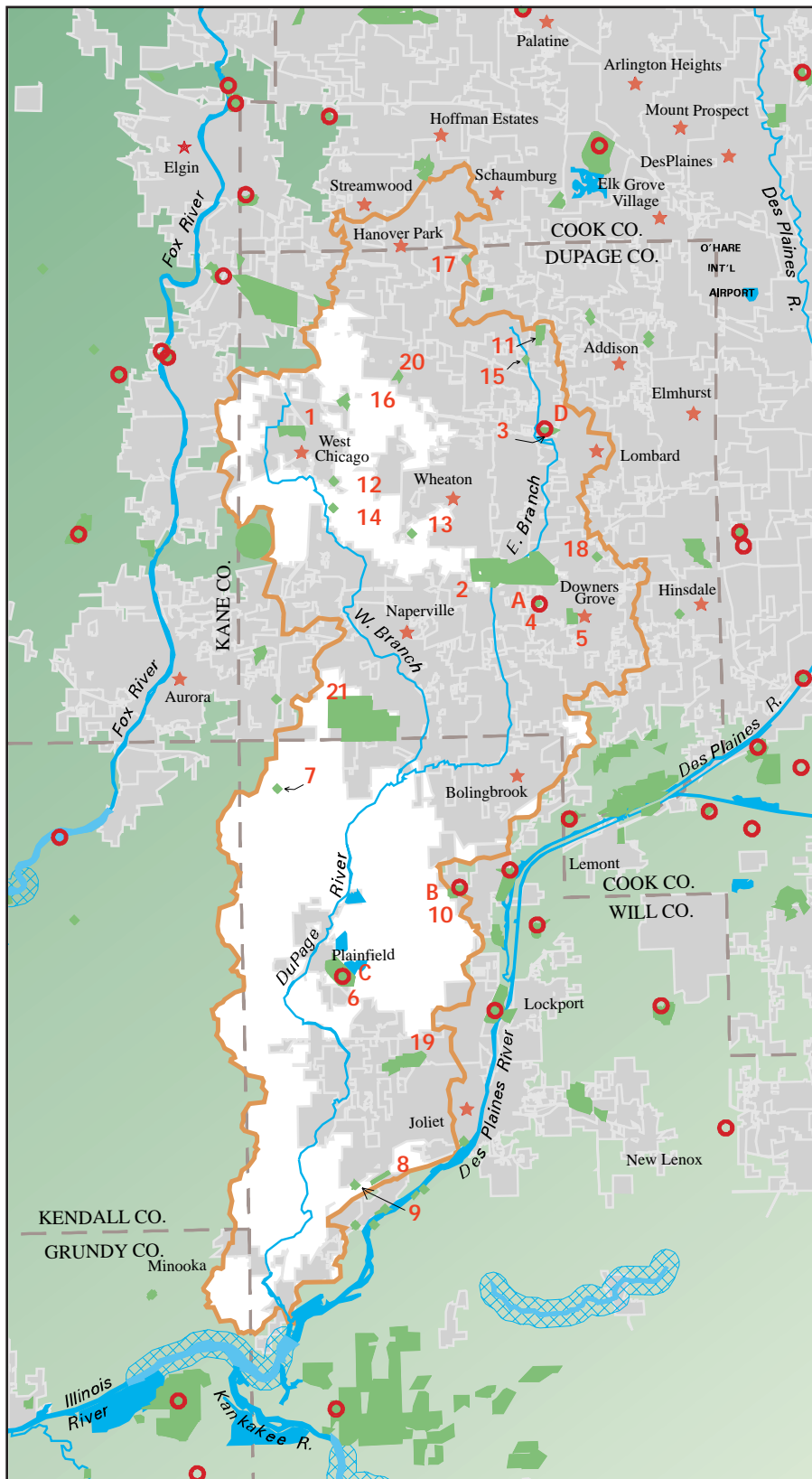
Historical Encyclopedia of Illinois and History of DuPage County

Fifty years ago the DuPage River basin was a rural area served by rail lines and narrow, two lane roads. Today, subdivisions, major highways, and commercial centers dominate. Many towns have grown together.

Most of the communities incorporated before 1900 are clustered along the three railroads that run west from Chicago through central DuPage County. The railroads, which were constructed in the 1850s to connect Chicago with the Mississippi River and Iowa, provided commuter service between Chicago and DuPage County, and established the pattern of development for about 100 years. The railroads brought people to buy land, not for growing crops, but for “a residential community, having as many desirable attributes as could be brought together, endowed by nature with the charm of a rural setting, but close enough to the metropolis, with its larger industrial interests.”

Away from the rail lines the country remained rural. As recently as 1950

Natural Areas and Nature Preserves



Illinois Natural Areas Inventory Sites

1. West Chicago Prairie
2. Morton Arboretum
3. Churchill Prairie
4. Belmont Prairie
5. Maple Grove Forest Preserve
6. Lake Renwick Heron Colony
7. Vermont Cemetery Prairie
8. Rockdale Railroad Prairie
9. Rock Run American Burnet Site
10. O'Hara Woods
11. Swift Road Meadow
12. West DuPage Forest Preserve
13. Herricks Lake Forest Preserve
14. McKee Marsh
15. East Branch Marsh
16. Prince Crossing Marsh
17. Rodenburg Marsh
18. Lyman Woods
19. Theodore Street Marsh
20. County Farm Road Wetland
21. Springbrook Prairie

Illinois Nature Preserves

- A. Belmont Prairie
- B. O'Hara Woods
- C. Lake Renwick
- D. Churchill Prairie



Lake Renwick Heron Rookery



Located east of the town of Plainfield, Lake Renwick is a spring-fed lake that was carved, not by glaciers, but by a scouring dragline. It is named for Mr.

Frank Renwick, one of three founders of the company — Chicago Gravel — that bought the property in 1913 to mine the gravel as raw material for concrete and ballast. The Plainfield Enterprise reported, “Steam shovels in the gravel pit are doing business at the rate of about 200 carloads per day.” The shovels dug deep enough to expose the springs that feed the lake.

Gravel was mined from March to November and ice was harvested when the lake was frozen. Once water filled the quarry, the area began to develop “resort-like” qualities. Chicago Gravel stocked the lake with carloads of fish for anglers. A swimming facility opened and swimmers could buy a \$3 season pass to use the bathhouse and the high dive; they could also rent swimsuits. Dancers could enjoy a lakeside dance hall which touted the “finest dance floor,

championship Charleston dancing, and music by Formento’s Singing Syncopators.” They could all take refreshment at Powell’s Mill, a lakeside restaurant decorated with a large Dutch Windmill. With all the activity, the lake soon became polluted and by the 1940s all that was left was the gravel company. In the 1950s, the company ceased digging gravel and finally closed in 1983.

The first evidence of nesting birds at the lake appeared in 1960 when a Will County Audubon member snapped a photo of nesting black-crowned night herons and great egrets. While raptors and waterloving birds also visit Lake Renwick, it is the nesting birds that have given the site regional renown. Five species of birds breed here — great blue heron, great egret, cattle egret, double-crested cormorant, and the state-endangered black-crowned night heron. It is the only spot in the state where you can find these birds breeding together.

Birding begins in late February when the ice melts and



Great Egrets

the great blue herons arrive. Great egrets arrive the last week of March, followed by black-crowned night herons and, finally, cattle egrets in mid-April. Each species prefers a different nesting height. The great blue herons and cormorants occupy the top layer, great egrets nest mid-height, and the black-crowned night herons and cattle egrets nest low to the ground. The nature preserve provides 44% of the state's nesting area for the double-crested cormorant and nearly 100% for the cattle egret.

Conservationists began campaigning to preserve the site when the gravel company closed in 1983. It wasn't until 1990 that the Will County Forest Preserve District and the Illinois Department of Natural Resources acquired the land; it was dedicated as a Nature Preserve in 1992. Four years later the rookery was threatened when development was planned only 200 yards west of it. Local citizens, concerned for the future of the birds and their habitat, persuaded the developer to delay his plans so they could try to save the area. They were successful and Copley Nature Park now stands on the land that was slated for development.

The rookery islands are small, only six feet wide and 200 feet long. The "A" islands were the original rookery site, but because of overcrowding and the loss of nesting trees, the rookery was expanded to "B" islands. Area residents have also built and installed nesting platforms on the islands, and are planning to remove fingers of land that extend to some nesting islands, thereby closing avenues that allow raccoons and other predators to threaten the nests. With just a little intervention, area residents have been able to help local nesting birds and get the most out of an old gravel pit.

Photos courtesy of the Forest Preserve District of Will County.

The Area at a Glance

The East Branch is considered a resource-rich area because of the woodlands and wetlands in the county forest preserves and in The Morton Arboretum.

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James P. Rowan

East Branch of the DuPage River in Churchill Woods

there were more than 400 farms in DuPage County and the population was only 155,000. Soon after, the great exodus to the suburbs began. With open space available only 24 miles from the Loop, the area developed explosively and soon experienced urban sprawl. Population in Will and DuPage counties almost quadrupled between 1950 and 1990, growing from about 289,000 in 1950 to more than 1.1 million in 1990, more than ten times the statewide growth. Will and DuPage counties are now part of the Chicago Primary Metropolitan Statistical Area and account for 10% of the state's population. DuPage County has the second largest population in the state and Will County has the fourth largest.

Ninety-four percent of the residents in Will and DuPage counties live in urban areas; 48.5% of the land is put to urban uses. During the 1840s DuPage County averaged from 2 to 6 inhabi-

tants per square mile. In 1990, it averaged 2,337 inhabitants per square mile. The area has a healthy economy and in 1990 DuPage County ranked first in the state in per capita income while Will County ranked tenth.

Because the area is located directly west of Chicago, most of the major transportation routes run east-west. Between 1973 and 1995, nearly 1,500 miles of road were added in the area, an increase of one-third. During the same time period, annual vehicle-miles traveled (VMT) more than doubled. The area contains 4.3% of the state's roads and accounts for 11.5% of its VMT.

AGRICULTURE

"Twenty-five years have scarcely passed since the first blow was struck, since the first shovelful of earth was moved, since the first furrow was turned and since the first shanty was erected in the township of Will [Will

County], now alive with population, and teeming with herds of stock and dotted all over with the habitations of its owners. . . . Irving's hero of Sleepy Hollow would not have been less surprised had he taken his twenty-years nap on the prairie of Will Township. His feelings upon awaking must, indeed, have been quite similar. Twenty years ago, where is now a succession of well-cultivated fields, with orchards and gardens, was nothing but an unbroken expanse of wild prairie; where were then less than a hundred inhabitants, are now almost a thousand."

W. H. Perrin and H. H. Hill
The History of Will County, Illinois, 1878

Many a beaver, otter, and bear were trapped along the DuPage's branches. The transition from furs to farming was not an abrupt one. Even after DuPage became a county in 1839, pelts were still being hauled to the Chicago markets. The economy

The Area at a Glance

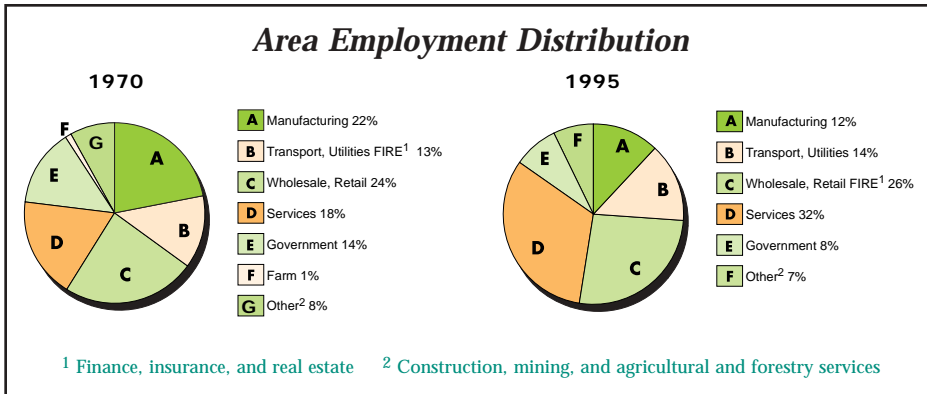
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Crops are grown on 46% of the land in Will County and 7.3% in DuPage County. Because of the rapid development during the last 15 years, farm acreage and the number of farms have declined nearly 60% in DuPage County and 30% in Will County.

Area Employment Distribution



began like most in the state — self-supporting farm centers. In the early years, Illinois farmers had little time to plant fruit trees; later they simply neglected to do so. By the mid-nineteenth century, however, they were awakening to the importance of cultivating fruit and ornamental trees and the area's first nursery was started in Naperville in 1849. By the early 1900s most of DuPage County's agriculture gave way to horticulture, and nurseries and greenhouses came to dot the landscape at more and more frequent intervals.

In neighboring Will County, agriculture remained devoted to farming and livestock production. While corn and oats were the principal crops, each year hundreds of bushels of cranberries were also harvested from Eagle Lake, which covered 1.5 sections of the county. The cranberry industry was destroyed when the lake was drained.

At present, crops are grown on 46% of the land in Will County and 7.3% in DuPage County. Because of the rapid development during the last 15 years, farm acreage and the number of farms have declined nearly 60% in DuPage County and 30% in Will County. Many of the farms that remain are likely to grow specialty

crops such as vegetables, melons, and other fruits; the two counties produce 14% of the state's nursery and greenhouse crops. Most of the \$124 million of the area's crop receipts are generated in Will County, primarily from corn and almost equal amounts of soybeans and specialty crops. Not surprisingly, DuPage County generates more than four-fifths of its receipts from specialty crops. Including livestock receipts, the area generates \$141 million in farm cash receipts annually, less than 2% of the state's total.

OUTDOOR RECREATION

"This was the golden era of the bicycle. [1890s] There is not much evidence of the old high wheelers' having been used here, but the 'safety' bicycle, having both front and rear wheels of the same size, was seen in large numbers and they were ridden by adults, as well as by their children ... This means of transportation occasionally was employed between here and the city, and a trip to the loop business district could be made in an hour and a half by the best riders. A popular tour was the Chicago, Aurora and Elgin triangle. This was known as the 'Century' tour. . ."

Hugh Dugan, 1949
*"Village on the County Line,"
 A History of Hinsdale, Illinois*



James P. Rowan

Belmont Prairie contains an example of high-quality wet-mesic prairie, of which only 125 acres remain in Illinois.

Today, the Chicago, Aurora, and Elgin tour can be cycled on the Illinois Prairie Path. DuPage County was the first place in the country where volunteers and local government agencies worked together to convert an abandoned railroad right-of-way to an off-road trail system. The resulting Illinois Prairie Path is a 55-mile one-way trail system following the route of the former Chicago, Aurora, and Elgin Railway. The trail crosses DuPage County and stretches into Kane and Cook counties. It was the country's first rail-to-trail conversion, Illinois's first nationally designated trail, and the beginning of the national "Rails-to-Trails" movement. With the Illinois Prairie Path as the backbone, DuPage County has more than 140 miles of interconnected cycling and hiking trails.

Although the area does not have any state or federally owned outdoor recreation areas, it does have an

extensive county forest preserve system. Within the basin there are 38 preserves totaling 13,583 acres. The DuPage County Forest Preserve District was created in 1915, making it the second county to establish an open space district. It began with the purchase of 79 acres of open land and today the county has 59 preserves totaling 23,027 acres (several of which are outside the basin boundaries). Since the early 1960s, the District plan has been to acquire land that will create continuous bands of open space along major waterways and between communities to provide natural floodwater storage areas, habitat for wildlife, and outdoor recreational opportunities.

Four state nature preserves and twelve natural areas are also found in the region. Churchill Prairie Nature Preserve, located in Churchill Woods Forest Preserve, is 65 acres of sedge meadow and wet prairie. It has more

than 400 native plant species that provide a colorful explosion of blooms from spring to fall.

Despite being surrounded by crop fields, O'Hara Woods Nature Preserve is one of the last undisturbed maple prairie groves remaining in northeast Illinois. In presettlement times it was protected from prairie fires by wet soil and a steep ravine, and a rich forest complete with nutrient-rich soil developed. In the spring, visitors can view warblers in the canopy above and marsh marigold, squirrel corn, and blue-eyed Mary carpeting the forest floor. During the summer, the fire pink, a flower more common in the Smoky Mountains, blooms.

Belmont Prairie is a small 10-acre remnant of the dry-to-wet prairies that once occurred in the area. It has a high forb density and low percentage of grass cover. The other nature preserve of the area is Lake Renwick Heron Rookery (see *Lake Renwick*



Susan Post

Squirrel corn

Heron Rookery sidebar).

The area's urban location has affected the traditional outdoor activities of boating, fishing, and hunting. While boat registrations in DuPage County are the third highest in the state, they are third lowest for the number of registrations per 1,000 residents. Together, Will and DuPage counties account for 9% of statewide boat registrations. The area has an array of small fishing lakes and accounts for 8% of the state's fishing licenses.

VEGETATION HISTORY

"The county is largely prairie, although it exhibits a great variety of soil and surface. There are several townships in which there is not a stick of timber (except as introduced by cultivation), yet considerable bodies of timber are found along the streams, and in isolated groves which were early called 'islands'."

George Woodruff
The History of Will County, 1878

Prior to settlement around 1820, 86.5% (206,270 acres) of the DuPage River area was prairie, said to be

among the finest and the most productive prairie in the state. When people first began to settle here they found "the prairie teeming with wildflowers, their beauty and fragrance surpassing all that they had ever dreamed of in floral loveliness." Some of the more romantic said, "it seemed as if the whole earth had been converted into green grass, blue sky, blossoming flowers and glorious sunshine." Again, George Woodruff comments, "The prairie is generally of the kind called high or rolling, and many of the low portions were called 'sloughs' as they contained water except in the dry season . . . The system of drainage by tiles is coming largely into use, which is making the 'sloughs' the most valuable portions of the land."

Today only 98 acres (0.04% of the basin) of undegraded, high quality prairie survive here; most of it can be found at Springbrook Prairie, West Chicago Prairie, and Churchill Prairie Preserve. Almost half is wet-mesic prairie (characterized by the presence of surface water after heavy rains); these 47 acres represent 37.6% of the

The Area at a Glance

Most of the \$124 million of the area's crops receipts are generated in Will County, primarily from corn and almost equal amounts of soybeans and specialty crops. DuPage County generates more than four-fifths of its receipts from specialty crops.

The Illinois Prairie Path, a 55-mile one-way trail system following the route of the former Chicago, Aurora, and Elgin Railway, was the country's first rail-to-trail conversion, Illinois's first nationally designated trail, and the beginning of the national "Rails-to-Trails" movement.

Within the basin there are 38 county forest preserves totaling 13,583 acres. Four state nature preserves and twelve natural areas are also found in the region.

Prior to settlement around 1820, 86.5% (206,270 acres) of the DuPage River area was prairie, said to be among the finest and the most productive prairie in the state. Today only 98 acres (0.04% of the basin) of undegraded, high quality prairie survive here.

The Morton Arboretum

Joy Morton always referred to The Morton Arboretum as a “ginkgo” because a ginkgo tree is one-of-a-kind, unrelated to any other plant. He considered the Arboretum to also be one-of-a-kind, unrelated to any other institution. Morton, the founder of Morton Salt, formally established The Morton Arboretum on December 14, 1922 on the grounds of the Morton estate near Lisle in DuPage County. In addition to the family home, the grounds consisted of agricultural land and a small amount of undisturbed woodland. Morton had never forgotten his roots — his father originated Arbor Day in 1872 and the family’s motto was “Plant Trees.”

Morton envisioned gathering in one location all the trees and shrubs, collected from throughout the world, that would grow in the northeastern Illinois climate. The Arboretum’s mission is “to collect and study trees, shrubs, and other plants from around the world, to display them across naturally beautiful landscapes, and to learn how to grow them in ways that enhance our environment. Our goal is to encourage the planting and conservation of trees and other plants for a greener, healthier, and more beautiful world.” In the first year, 138,000 trees were planted.

Today the Arboretum is a 1,700-acre living, aesthetically pleasing, outdoor museum displaying thousands of plants representing nearly 4,000 different species from around the world. It also serves as a trial garden for woody plants — to see if they can survive the ever-changing continental climate of the Midwest — and provides research scientists, horticulturists, arborists, teachers, students, and homeowners with a wealth of information. The research program develops new tree varieties, studies how trees endure in urban environments, and saves endangered plants.

In 1962, Arboretum employee Ray Schulenburg accepted a new assign-

ment — to propagate native prairie plants within a tract of newly acquired Arboretum property. Why would a museum of woody plants want a prairie? For thousands of years prior to European settlement, oak and hickory trees, hazel and willow shrubs, and many other woody plants fitted into a mosaic of prairies and marshes. It was from these associations that the Arboretum could best understand the woody plants of northeast Illinois — the prairie provided the ecological context for their presence.

The new property had been an 1820s homestead and intense farming had resulted in severe soil erosion. Schulenburg and his crew began hand-planting prairie species on just half an acre, weeding around the seedlings with linoleum knives and pocket whetstones to remove competition. This would become the second major prairie restoration project in the country (the first was at the University of Wisconsin’s Arboretum in Madison). Many of Ray’s handpicked crew became the beginning of the prairie restoration movement.

Today, the 100-acre Schulenberg Prairie is largely a self-sustaining prairie and savanna, consisting of nearly 350 native plant species, including the state-endangered white lady slipper orchid, sand milkweed, and prairie



A recently restored streamback along the East Branch of the DuPage River at the Morton Arboretum



Photos courtesy of the Morton Arboretum

Tour group at Morton Arboretum

bush clover. As a visitor emerges from the grove of trees onto the prairie, the words of an early traveler, Eliza Steele, might come to mind. "I was in the midst of a prairie! A world of grass and flowers stretched around me, rising and falling in gentle undulations, as if an enchanter had struck the ocean swell, and it was at rest forever. Acres of wild flowers of every hue glowed around me, and the sun arising from the earth where it touched the horizon was 'kissing with golden face the meadows green.' What a new and wonderous world of beauty!"

The Area at a Glance

Forest covered about 13.5% (32,192 acres) of the land in 1820. It was concentrated on the slopes, ravines and bottomlands associated with the DuPage River, and in protected areas associated with moraines. Today 11% (26,793 acres) of the area remains forested (83% of the original amount).

In the early nineteenth century wetlands covered far more of the area than they do today — 30-39% (71,539-93,000 acres) then compared to 4.5% (10,695 acres) now, slightly higher than the statewide total of 3.2%. Surviving wetlands tend to be concentrated along the river and stream corridors and in the northwest third of the basin. None are designated as high-quality.

Almost 47% of the state's flora, or a total of 1,447 species of vascular plants, have been reported from the area. Of these, 939 (64.9%) are considered native to the area and 508 (35%) are introduced, non-native species. Seventeen of the native plants are considered threatened or endangered.

high quality wet-mesic prairie remaining in the state. Another 45 acres of the undegraded prairie is mesic prairie, a species-dense plant community where 15 to 30 plant species may be found in a half-meter square. This acreage represents 16% of Illinois' remaining mesic prairie. Lastly, six acres of dry-mesic prairie remain, 10% of the entire high quality dry-mesic prairie in the state. Here you can find the state-threatened Hill's thistle and ear-leafed foxglove.

Forest covered about 13.5% (32,192 acres) of the land in 1820. It was concentrated on the slopes, ravines and bottomlands associated with the DuPage River, and in protected areas associated with moraines. These groves of forest provided the impetus for people to settle — in DuPage County

there was Downer's Grove, Babcock's Grove (which later became the towns of Lombard and Glen Ellyn), and Jewel Grove (which later became Wheaton); in Will County there was Twelve Mile Grove, one of the finest groves in northern Illinois that remains only in the writings of a forgotten pioneer: "Upon approaching the timber one is reminded of the little clumps of timber described by Eastern travelers as appearing on the Great Desert, toward which their anxious eyes and weary limbs ever turn for refreshing shelter."

Today 11% (26,793 acres) of the area remains forested (83% of the original amount). Noteworthy forest remnants include a natural area within The Morton Arboretum (1,393 acres), Herricks Lake Forest Preserve (760 acres), Lyman Woods (100 acres)



James P. Rowan

Hill's thistle is one of 66 plant species listed as threatened in Illinois.

and Maple Grove Forest Preserve (48.5 acres). Only 0.5% of the remaining forest — 130 acres of mesic upland forest — is in a high quality, undegraded condition. This represents 5.1% of the total high quality mesic upland forest left in Illinois. Five state-listed plant species are found in this community — the endangered purple flowering raspberry and running pine, and the threatened dog violet, spotted coral root orchid, and the pretty sedge.

In the early nineteenth century wetlands covered far more of the area than they do today — 30-39% (71,539-93,000 acres) then compared to 4.5% (10,695 acres) now, slightly higher than the statewide total of 3.2%. Surviving wetlands tend to be concentrated along the river and stream corridors and in the northwest third of the basin. None are designated as high quality.

LITTLE THINGS THAT RUN THE WORLD

Flora

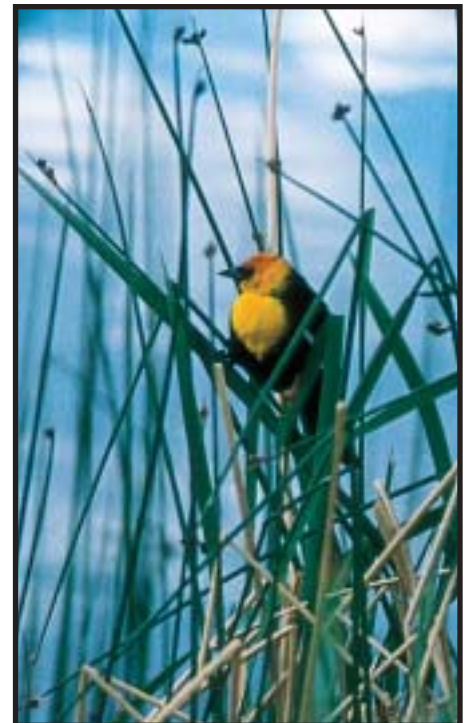
In 1834, Morris Sleight wrote a letter to his wife describing the settlement that would become Naperville, “. . . the first view of an Illinois Prairie is Sublime, I may almost say awfully Grand, as a person needs a compass to keep his course-but the more I travel over them the better I like them. There is a great variety of Flowers now on the Prairies, but they tell me in a month from this time they will be much prettier. I have sent you a few of them by Mr. Douglass, which will be all faded by the time you get them, but they will be interesting to you, as you can be sure they were picked from the Prairie of Illinois. There is a number of other kinds on the dry Prairies. Some Resembl Sweet William, some Pinks, Sun flowers, and almost every variety that grows in our gardens.”

From February to late October a profusion of flowers may be found in this region. Blooming begins with skunk cabbage, a plant that generates its own heat and is found poking through the snow. It ends with bottle gentian, which adds a touch of violet-blue to the rusts and yellows of fall. Almost 47% of the state's flora, or a total of 1,447 species of vascular plants, have been reported from the area. Of these, 939 (64.9%) are considered native to the area and 508 (35%) are introduced, non-native species.

Extensive urbanization and ground disturbance most likely caused the proliferation of non-native plant species here. Sometimes the actions of misinformed and even well-intentioned residents allowed non-natives to gain a foothold. W.H. Perrin and H.H. Hill

report in the *History of Will County* (1878), “An old lady, one of the early settlers of the village [Plainfield], brought with her from the East a quantity of burdock seed, declaring it to be ‘such an excellent yarb’ that she was bound to have a crop growing. She accordingly sowed it in every available spot. That the crop did grow, the citizens of the village can bear witness, notwithstanding their utmost efforts to the contrary.”

Seventeen of the native plants are considered threatened or endangered; they represent 5.1% of the state's listed plant species. Nine are listed as endangered — bearded wheat grass, downy yellow painted cup, eastern



Michael Jeffords

The yellow-headed blackbird is one of 26 state-listed endangered bird species. It breeds in wetland habitats, one of the most significant avian habitats in the area.

The Wolf Hunt

“Too many geese, deer, and beavers” is a common topic of area conservation newsletters and even the *Chicago Tribune*. Conflicts with wildlife, however, aren't new. The best example is provided by the timber wolf, which was common in Illinois in the late 1700s and early 1800s. Reports indicate that wolves attacked large game animals and livestock, sometimes even young horses. To eliminate the problem, settlers organized wolf hunts. W.H. Perrin and H. H. Hill wrote in *The History of Will County*, “An able and eloquent representative had risen in the Legislature and declared that, ‘When the denizen of the prairie is locked in the embrace of Morpheus, the shades of night have settled round his abode and all nature has settled to rest, then the noisome wolf rises from his lair, and roaming up and down the land seizes the inoffensive pig and the innocent lamb, devouring them, to the great detriment of said denizens,’ and the law for the protection of domestic animals against the ravages of ‘said wolf’ had been passed, allowing to any one who would secure the scalp of one these ‘noisome’ animals, a bounty of \$1.”

Suddenly the business of wolf hunting was lucrative, and for many years newly settled counties paid their state taxes with bounty money. By the middle 1800s the wolf hunt was a major social event. The hunts were conducted on foot or horseback and as many as 60 wolves could be ensnared during a day's hunt. One of the last hunts in the area was held in 1856 in Brush Hill (later to become Hinsdale). Marion Knoblauch noted in the *DuPage County Guide*, “More than a 1000 men from Fullersburg, Downer's Grove, York Center, Cass, and Lyons joined in a communal assault on wolf and deer by forming a circle and connecting their villages and converging on a pre-arranged spot, marked by a flag on a tall staff, about three miles south of the present center of Hinsdale. It was one of the last community hunts in Downer's Grove Township. The wolf was rapidly retreating before the march of civilization.” The Will County historians note, “But though the profit derived was comparatively great, the propagation of the wolf was neglected, and now a wolf, should one be captured in the county, would be counted as a curiosity.” By 1860, wolves had disappeared from Illinois.

The Area at a Glance

At least 270 of the 309 bird species that regularly occur in the state can be found in the DuPage River basin. Of these, 149 breed or formerly bred here, including 13 state endangered species and six state threatened species.

Wetland habitats represent the most significant avian habitat in the area and have more state endangered and threatened species that breed (or have bred) here than any other area of similar size in the state.

The greatest threat to area birds is habitat loss and suburban encroachment. Grassland restoration, especially around existing wetlands, would provide habitat for declining grassland birds as well as help buffer wetlands from the surrounding development and provide additional nesting habitat. Similarly, wooded buffer strips around wetlands could perform the same functions.

blue-eyed grass, heart-leaved plantain, prairie white-fringed orchid (also listed as federally endangered), purple flowering raspberry, Richardson's rush, running pine, and Tuckerman's sedge

— and eight are listed as threatened — dog violet, ear-leaved foxglove, Hill's thistle, little green sedge, marsh speedwell, pretty sedge, spotted coral-root orchid, and white lady's slipper.

Birds

At least 270 of the 309 bird species that regularly occur in the state can be found in the DuPage River basin. Of these, 149 breed or formerly bred here, including 13 state endangered species and six state threatened species.

Wetland habitats represent the most significant avian habitat in the area and have more state endangered and threatened species that breed (or have bred) here than any other area of similar size in the state. Some of the breeders include the yellow-headed blackbird, American bittern, least bittern, snowy egret, black-crowned night heron, yellow-crowned night heron, northern harrier, red-shouldered hawk, king rail, and short-eared owl.

The greatest threat to area birds is habitat loss and suburban encroachment. A coordinated management of wetland habitats offers the best hope for sustaining populations of endangered and threatened species. Grassland restoration, especially around existing wetlands, would provide habitat for declining grassland birds as well as help buffer wetlands from the surrounding development and provide additional nesting habitat. Similarly, wooded buffer strips around wetlands could perform the same functions.

Two globally extinct species, the passenger pigeon and the Carolina parakeet, formerly occurred in the basin, as did the locally extirpated sharp-tailed grouse, greater prairie chicken, ruffed grouse, and the black rail. August Maue wrote in the *History of Will County* (1928), "Passenger pigeons were so numerous that they passed in clouds rather than in flocks. The author recalls such a cloud, which passed over eastern Will County half a century ago. In the distance, it resem-

bled a dark cloud, which appeared to be agitated by the wind. The moving of many wings produced this effect upon the eye. Roosts were found in many places, the best known being on the bluffs south of the gravel works on the Channahon road. The bluffs were covered with trees, native timber undisturbed. In these trees the birds passed the night assembling in such numbers that the trees were frequently broken down by the weight of the birds. Hunters came there at sunrise to shoot the birds as they went out in the morning to go to their feeding grounds. The bird is now extinct."

Mammals

August Maue also described the mammals in Will County in 1929: "Wild animal life is found in many of the smaller species, gopher, field mouse, white-footed mouse, red squirrel, gray squirrel, ground squirrel, gopher, muskrat, mole, wood-chuck, cotton tail rabbit, mink, and opossum. The larger species are represented by coon, prairie wolf, timber wolf, and fox." Several years later, in 1948, Marion Knoblauch wrote about the mammals in DuPage County: "Only a few small mammals - squirrels, gophers, rabbits, woodchucks, opossums, weasels, skunks, minks, and moles - still exist in the county, but in pioneer days red foxes, prairie wolves, deer, elks, and bears were common."

Today, 43 mammals (73% of Illinois' mammal species) are known or likely to occur in the DuPage River basin. The smaller species described by both gentlemen still exist in the area. The beaver and the white-tailed deer had been extirpated from the basin, but have made such an astounding recovery that some residents consider them a

nuisance. Other large species such as the timber wolf, bear, and elk have been extirpated from the state.

Many mammals are ecological generalists and it is no surprise that they have adapted to living in the suburbs. A pamphlet from the DuPage County Forest Preserve District states, "The presence of wild animals in urban areas reflects their ability to adapt to replacement of fields, trees and streams by lawns, ponds, gardens, and chimneys. Animals may use this new environment at the expense of their human neighbors, creating a disturbance or causing property damage. However, these animals are behaving naturally, not acting with malicious intent." The DuPage County Willowbrook Wildlife Center answers more than 12,000 questions a year about urban wildlife.

Reptiles and Amphibians

Eleven amphibian and 18 reptile species occur here, representing 28% of the amphibian and 30% of the reptile species found in Illinois. Two state threatened species, Kirtland's snake and Blanding's turtle, are known to exist in the basin, but the state endangered eastern massasauga rattlesnake has been extirpated. August Maue wrote in 1928, "Rattlesnakes were numerous when the first settlers appeared upon the prairies. The bite of this snake was considered deadly at that time and is still considered so . . . They were found near low lands or marshes most frequently. When they appeared near habitations they were found in pairs, male and female together. They were exterminated rapidly, becoming extinct more than sixty years ago." As a precaution against these common snakes, residents venturing out onto the prairies were advised to "wear heavy, high

The Underground Railroad

The Underground Railroad, a shadowy network that sheltered fugitive slaves, operated in some 30 villages of the DuPage River basin. The network became active before the Civil War, about the same time that the first railroads were being built. Thus, railroad lingo provided perfectly coded double meanings. The “passengers” were slaves from Missouri who had escaped, evaded searchers, and crossed the Mississippi River into Illinois. The “conductors” were local residents who opposed slavery and conducted the “passengers” to the next “station” (stopping place). Secrecy was vital, especially after the Fugitive Slave Act passed in 1850 — people caught harboring slaves could be fined or imprisoned.

Since Chicago was the Illinois terminus of most Underground Railroad routes (or “lines”), “passengers” coming from the south, southwest, and western parts of the state passed through DuPage County. Routes initially followed the rivers, many of which slant toward Cook and DuPage counties. Escaping slaves would enter Illinois at Alton or Quincy and follow the Illinois River to the Fox, Des Plaines or DuPage rivers. According to the *Will County Bicentennial History*, several homes in Plainfield were part of the Underground Railroad, with one station built inside a woodpile. Later, real railroads were used to ferry escaping slaves who were disguised as passengers or hidden in crates.

The Illinois Institute (presently Wheaton College) was one of the stations in DuPage County. There “passengers” were hidden in houses throughout the college community. In Downer’s Grove, a local blacksmith hid slaves under buffalo skins in his shop. Because the Underground Railroad was an illegal operation, nothing was written down, making documentation of its operations difficult. Discoveries like the one made by the Winfield teenagers (see text, page 4) are very important. Otherwise our only knowledge comes from a rapidly vanishing group of residents who remember the stories repeated by earlier generations, telling the stories themselves to keep the mysteries alive in suburbia.



A watercolor of Main Hall with Ruth Nutting's boarding house in the foreground shows how the Illinois Institute looked during the time of the Civil War.

Courtesy of Wheaton College Archives.

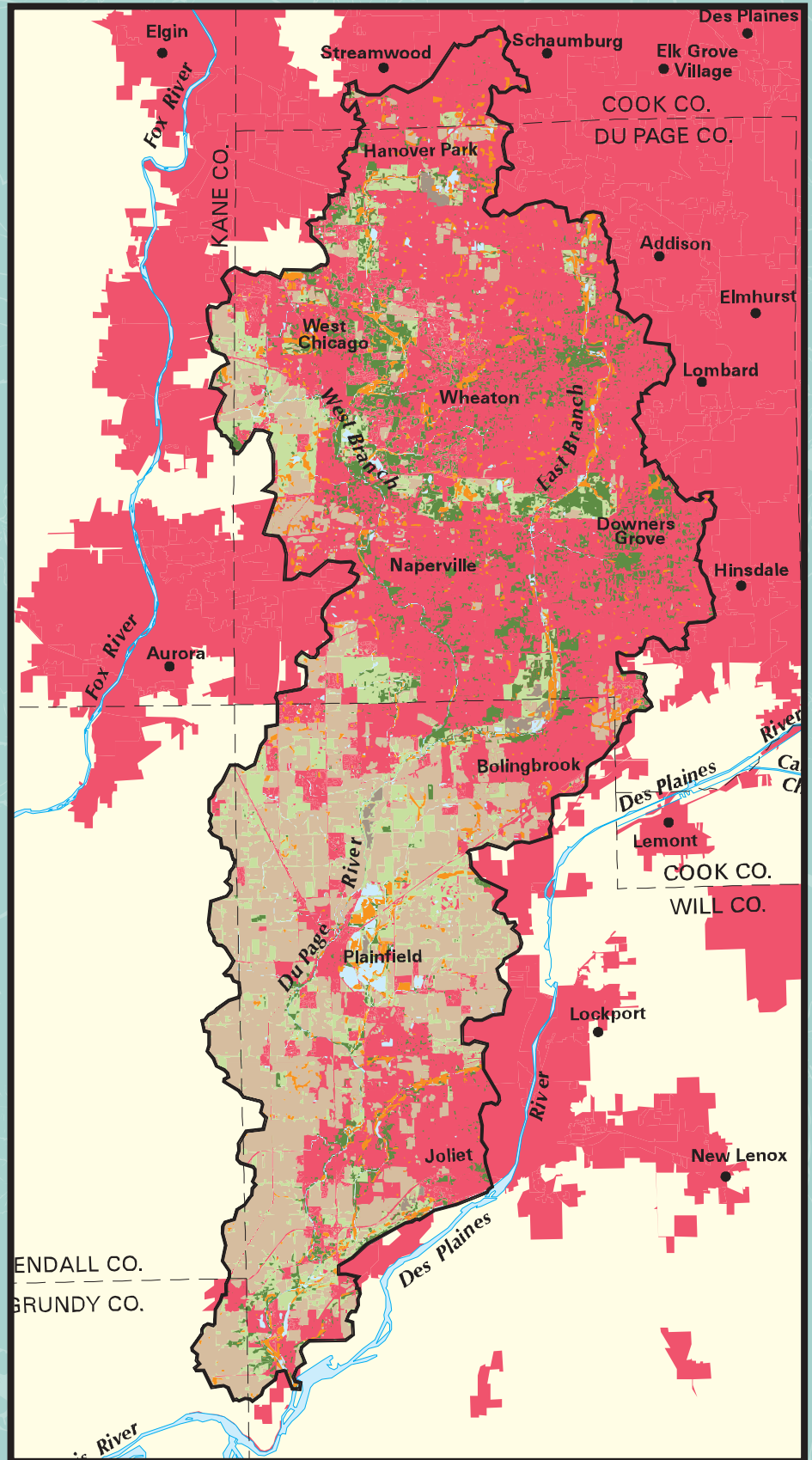
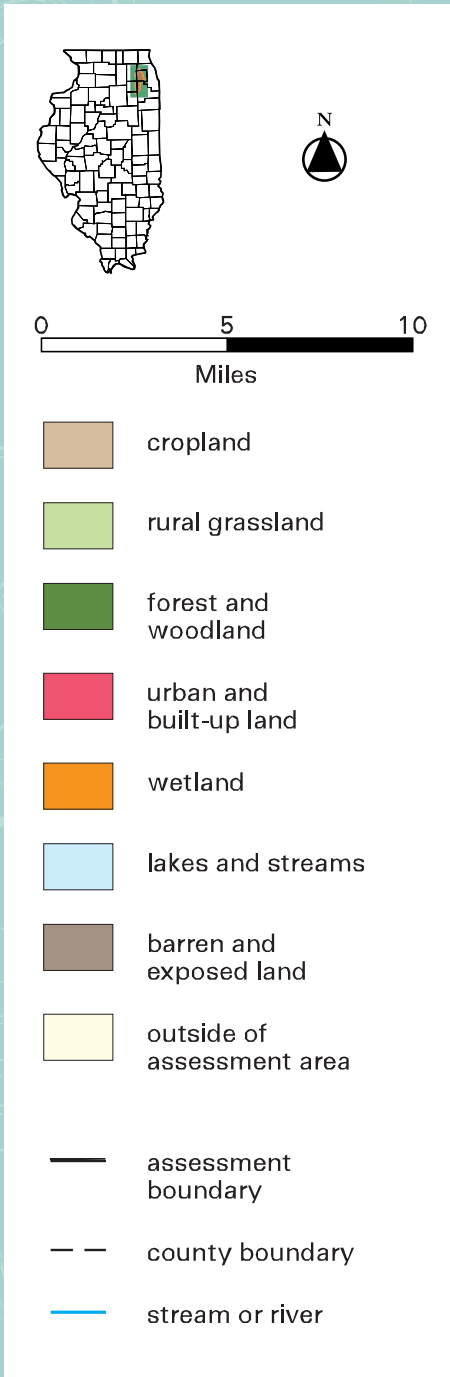
The Area at a Glance

Forty-three mammals (73% of Illinois' mammal species) are known or likely to occur in the DuPage River basin. The beaver and the white-tailed deer had been extirpated from the basin, but have made such an astounding recovery that some residents consider them a nuisance.

Eleven amphibian and 18 reptile species occur here, representing 28% of the amphibian and 30% of the reptile species found in Illinois. Two state threatened species, Kirtland's snake and Blanding's turtle, are known to exist in the basin, but the state endangered eastern massasauga rattlesnake has been extirpated.

The DuPage River basin supports 53 species of fishes, 18 species of mussels, and 10 species of malacostracans (large crustaceans). Over the past few decades, DuPage River fish populations have improved significantly; a 1997 IDNR fish survey recorded an increase in the number of individuals of all sizes, indicating a healthy population that is reproducing.

Land Cover





James P. Rowan

Blanding's turtle is one of two state threatened species known to exist in the basin. Wetland destruction and contamination have reduced its numbers.

The Area at a Glance

Of the 18 mussel species reported in the basin, only five have been collected alive in the past 20 years.

Municipal wastewater discharges, agricultural and urban surface runoff, channelization, and nonirrigated crop production are the major sources of water quality degradation. Exacerbating these problems are dams — they concentrate contaminants in the pools behind them, fragment the fish population, keep fish from their historic spawning grounds, and cause unstable dissolved oxygen levels, to name a few of their impacts.

Urban sprawl has destroyed many wetlands, natural sponges that are one of the biggest defenses against polluted runoff. A Natural Areas Management Program plan adopted in 1992 by the Forest Preserve District of DuPage County calls for restoring 9,000 acres of the District's highest quality wetlands, woods, and prairies by the year 2003.

leather boots and to carry a bottle of whiskey as first aid.”

Blanding's turtle, a medium-sized aquatic turtle with a bright yellow chin, was once common in the shallow open water areas of cattail marshes, sloughs, ponds and flooded ditches of north-eastern Illinois. Because wetland destruction and contamination have reduced its numbers in the basin, the DuPage County Forest Preserve District is releasing captive-reared Blanding's turtles into appropriate habitats in forest preserves. Rearing young turtles in captivity helps to reduce juvenile predation as well as accelerate growth so that reproduction begins sooner than the usual 13 to 18 years of age.

Kirtland's snake is a small, nocturnal, and secretive snake that prefers to shelter beneath logs or in crayfish burrows. It is found in wet prairies, wet meadows, and grassy edges of creeks. When threatened it flattens its body and becomes rigid. Its popula-

tion has declined as wetlands and native prairies have been destroyed, and herbicides and pesticides have reduced the numbers of its major food source, earthworms.

Overall, the opportunities for amphibians and reptiles are poor because the basin lacks a significant amount of wet prairie, and riparian zones have been destroyed or degraded. Restoring these and improving water quality throughout the area would do much to improve the potential for habitat. Riparian zones can also act as dispersal corridors for many amphibians and reptiles, thus reducing the effects of habitat fragmentation.

Aquatic Biota

The DuPage River basin supports 53 species of fishes, 18 species of mussels, and 10 species of malacostracans (large crustaceans). George Woodruff wrote in 1878, “All the larger streams abound in fish of the kinds known in common

Forest Preserve Sampler

The DuPage River area has one of the best forest preserve systems in the state and residents of Will and DuPage counties recently supported referenda to increase their county's holdings. The forest preserves are a good way to seek solitude and sample past landscapes.

The Regional Trail is a 7.5 mile linear, limestone path that connects three DuPage County preserves — Blackwell, Herricks Lake and Danada. Until purchased by the district, **Blackwell Preserve** was a gravel quarry; careful restoration has reclaimed its marshes. While excavating McKee Marsh for restoration, district employees uncovered the skeleton of a woolly mammoth that lived 14,000 years ago, one of the oldest paleontological finds in northeast Illinois. As you hike the trail here, look for bob-o-links and spittlebugs.

Herricks Lake Preserve, formerly an early settler's homesite, was one of the first parcels purchased by the district. Herricks Lake is a natural pond that has had little disturbance and is home to 19 mammal and 108 bird species. Here the hiker can find a colorful array of birds, including Baltimore orioles, goldfinches, indigo buntings, and the state-listed black-crowned night heron. **Danada Forest Preserve**, formerly the private estate of Dan and Ada Rice, is now the esteemed Danada Equestrian Center. Here the trail takes you through a prairie and savanna restoration.

Greene Valley Forest Preserve is the fourth largest DuPage County Forest Preserve. It is named after the Greene family, early settlers of the area. Surveyors who mapped out the land in 1840 noted that they " . . . left Brill's wheat field and entered hazel and red oak brush and scattering timber." In 1840 the area had scattered and stunted oak trees interspersed with thorn thickets and wooded ravines. Today, the preserve has a collection of plants and animals not commonly found in other areas of the county. In the northern part of the preserve, an oak woodland, untouched for more than half a century, boasts a spectacular wildflower show in early May.

The East Branch of the DuPage River provides more than two miles of scenic river frontage as it winds



James P. Rowan

Churchill Prairie in Churchill Woods Forest Preserve

through **Churchill Woods Forest Preserve** in Glen Ellyn. Churchill Hill Prairie Nature Preserve, one of the last native prairies in DuPage County, is located in the northern part of the forest preserve. The southern part of the preserve contains what is left of Babcock's Grove, a savanna where you can find wide-spaced oaks with prairie vegetation underneath. The combination of savanna, prairie, and woodlands provides a colorful wildflower display, from early spring's Dutchmen's breeches, to summer's pale-touch-me-not, and fall's final flowers of the cerulean blue bottle gentian.

Hammel Woods Forest Preserve in Will County has several miles of hiking trails that meander through the woods and along a ridge overlooking the DuPage River. Here you can put your canoe in and paddle to where the DuPage River meets the Des Plaines in Channahon. Both spring wildflowers and fall colors offer a changing tapestry, and the hike to Grinton Grove offers great views.

language as pike, buffalo, red horse, bass, sunfish, etc.” Today, common fishes found throughout the drainage include the white sucker, sand shiner, spotfin shiner, bluntnose minnow, and green sunfish. Non-native carp are common in large streams.

In the DuPage River fish populations have improved significantly over the past few decades; a 1997 IDNR fish survey recorded an increase in the number of individuals of all sizes, indicating a healthy population that is reproducing.

Only one state-listed fish, the endangered Iowa darter, is found here. Once widespread in the northern half of Illinois, the Iowa darter inhabits vegetated lakes and pools of sluggish rivers. This species is now found only sporadically.

Common species of mussels include the fat mucket, Wabash pigtoe, plain pocketbook, white heelspitter, and cylindrical papershell. Of the 18 mussel species, only five have been collected alive in the past 20 years. One state threatened mussel (spike) and two state endangered mussels (slipper-shell and rainbow) have historically been reported from the basin, but no live individuals have been collected since the 1950s and the species are presumed extirpated from the area. Two non-native species of mussel have been collected — the Asian clam, which is found throughout Illinois, and the Chinese mystery snail, which was discovered in the area in 1997.

Of the ten species of crustaceans found here, the introduced rusty crayfish is the most common and is displacing the native northern clearwater crayfish, which occupies the same habitat of rocky substrates in fast current.

PROBLEMS AND SOLUTIONS

The rapid urbanization of the river basin has created many problems, poor water quality (primarily nutrient contamination) among them. Municipal wastewater discharges, agricultural and urban surface runoff, channelization, and nonirrigated crop production are the major sources of water quality degradation. Exacerbating these problems are dams — they concentrate contaminants in the pools behind them, fragment the fish population, keep fish from their historic spawning grounds, and cause unstable dissolved oxygen levels, to name a few of their impacts. Most stream species cannot live in the silty pools above dams.

Average streamflows, which vary from year to year, are expressed as inches of runoff over a stream’s watershed. Since 1970, the average streamflow recorded by the three gaging stations in the basin has increased 20%; the major contributing factor is growing volumes of wastewater discharge. While precipitation has also increased, trends for all three stations indicate a significant flow increase in fall, winter, and, to a lesser degree summer and spring.

Sprawl has also destroyed many wetlands, natural sponges that are one of the biggest defenses against polluted runoff. Although nine-tenths of DuPage County’s wetlands are gone, a Natural Areas Management Program plan adopted in 1992 by the Forest Preserve District of DuPage County calls for restoring 9,000 acres of the District’s highest quality wetlands, woods, and prairies by the year 2003.

As rapid development encroaches on open landscapes, wildlife is forced into smaller areas or into the devel-

The Area at a Glance

As rapid development encroaches on open landscapes, wildlife is forced into smaller areas or into the developed areas themselves. Two species in particular are having an impact — Canada geese and white-tailed deer. The overabundance of white-tailed deer is affecting plants in forest preserves, as well as backyard shrubs, because of excessive browsing.

Area residents have passed bond referenda to acquire conservation lands. DuPage County — where land is being developed at the rate of 3,000 acres per year — will acquire an estimated 2,300 acres of land for forest preserves and Will County intends to buy 6,500 acres, primarily land adjacent to existing county preserves or along crucial waterways.



Michael Jeffords

Excessive deer browsing is affecting plants in the basin.

oped areas themselves. Two species in particular are having an impact — Canada geese and white-tailed deer. Canada geese are drawn to short green grass with few predators, features prevalent in their favorite

Northern Canada habitat. Because their numbers are increasing in the river basin, a Canada Goose Habitat Control Conference was held in 1999. The number one topic was how to make the landscape less attractive to

geese. Recommendations included breaking up open lawn with trees and shrubs, and planting native vegetation around detention ponds.

The overabundance of white-tailed deer is affecting plants in forest preserves, as well as backyard shrubs, because of excessive browsing. Deer have also become a threat to drivers and the number of vehicle-deer collisions continues to rise. Land managers and policy makers are struggling to reduce the number of deer (keeping in mind the affection many humans have for these mammals) to provide a healthy habitat for other species as well.

Aware of their diminishing green space, area residents have passed bond referenda to acquire conservation lands. In 1997, DuPage County — where land is being developed at the rate of 3,000 acres per year — passed a \$75 million general bond referendum to acquire an estimated 2,300 acres of land for forest preserves. The referendum mandates that the Forest Preserve District acquire lands for wildlife habitat, trails and greenway corridors, and flood control as well as wetlands, prairies, and forests. In 1998 Will County passed a \$70 million bond referendum to acquire conservation lands. Its Forest Preserve District intends to buy 6,500 acres, primarily land adjacent to existing county preserves or along crucial waterways.

The residents of the river basin realize that the area will continue to grow and that natural resource issues are not short-term. That is why they are working with various groups, such as the Upper DuPage River Ecosystem Partnership and The Conservation Foundation, to protect what they have and restore some of that which has been lost. 🌿

(continued from inside front cover)

In addition to coordinating IDNR programs with those of Ecosystem Partnerships, the Ecosystems Program:

- provides technical assistance to the partnerships, such as resource management plans for use by participating landowners;
- assesses resources in the area encompassed by each Ecosystem Partnership, collecting data that the local partners themselves may use to set project priorities and design projects, and supplying scientific support to ecosystem partners, including on-going monitoring of Ecosystem Partnership areas;
- funds site-specific ecosystem projects recommended by each partnership. Such projects may involve habitat protection and improvement, technical assistance, and research and education, including projects that seek to expand the relationships between natural resources, economic development, and recreation.

To provide focus for the program, IDNR developed and published the *Inventory of Ecologically Resource-Rich Areas in Illinois*, and is conducting regional assessments for areas in which a public-private partnership is formed.

The *DuPage River Basin: An Inventory of the Region's Resources* is based on one of these assessments, the *DuPage River Area Assessment*. The assessment was compiled by staff of IDNR's Division of Energy and Environmental Assessment, Office of Realty and Environmental Planning; and the Illinois State Museum, the Illinois Waste Management and Research Center, and the Illinois Natural History, State Geological, and State Water Surveys of IDNR's Office of Research and Scientific Analysis.

The *DuPage River Area Assessment* and all other CTAP and Ecosystems Program documents are available from the IDNR Clearinghouse at (217)782-7498 or TTY (217)782-9175. Some are also available on the World Wide Web at:

<http://dnr.state.il.us/ctap/ctaphome.htm> and

<http://dnr.state.il.us/c2000/manage/partner.htm>.

For more information about CTAP, call (217)524-0500 or e-mail at ctap2@dnrmail.state.il.us; for information on the Ecosystems Program, call (217)782-7940 or e-mail at ecoprg@dnrmail.state.il.us.

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EDITOR: KAREN MILLER

AUTHOR: SUSAN POST

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