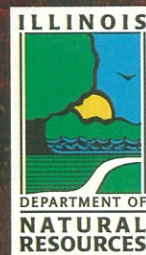


THE ILLINOIS BIG RIVERS

AN INVENTORY OF THE REGION'S RESOURCES

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ABOUT THIS REPORT

The Illinois Big Rivers: 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 six-year State of Illinois initiative to enhance nature protection and outdoor recreation by reversing the decline of the state's ecosystems.

Conservation 2000 is the culmination of recommendations from CTAP, the Illinois Conservation Congress, and Governor Edgar's Water Resources and Land Use Priorities Task Force. The CTAP recommendations came out of its 1994 report on the state of the Illinois environment. CTAP investigators inventoried and analyzed existing environmental, ecological, and economic data to establish baseline conditions from which future changes in ecological conditions 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 Governor Edgar's 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:

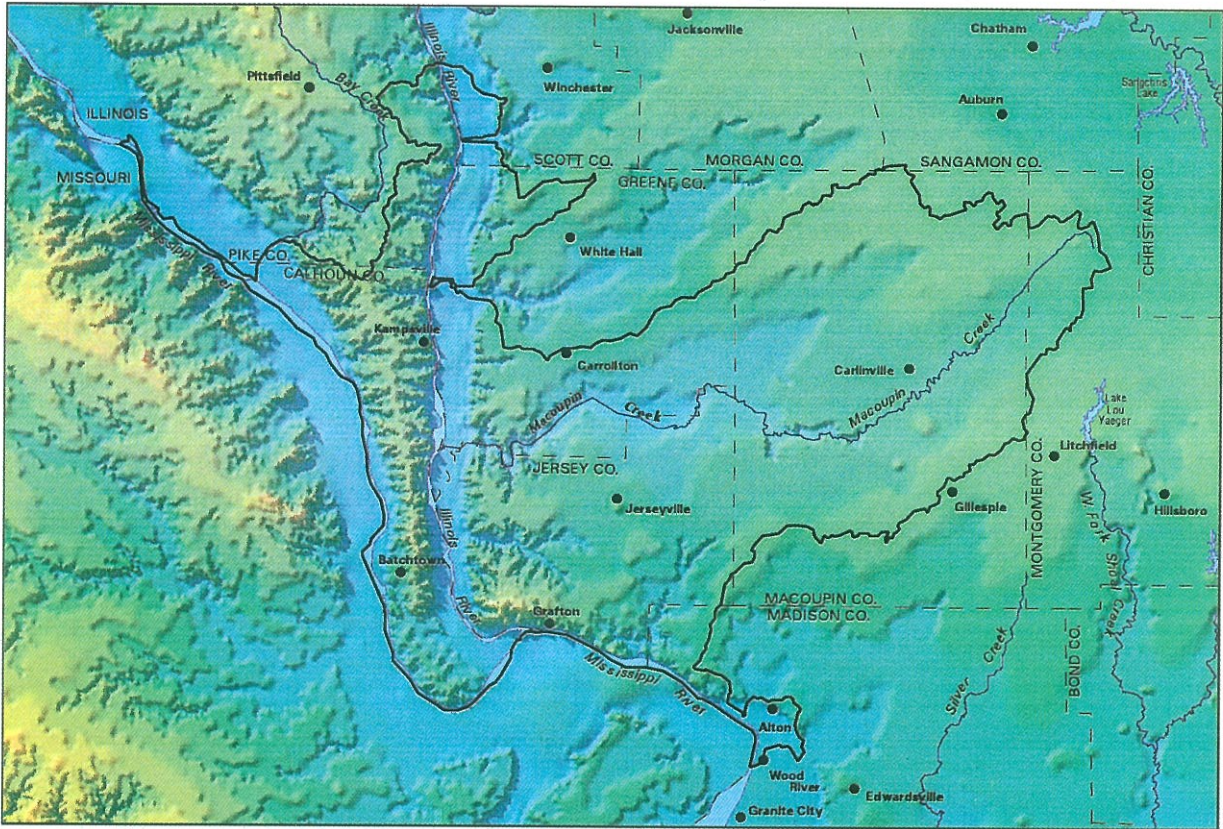
- organized on a regional scale;
- voluntary and based on incentives;
- guided by comprehensive and comprehensible ecosystem-based scientific information;
- initiated at the grassroots rather than in Springfield.

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, drawing on \$100 million to fund nine programs in three state agencies.

One of these programs 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)



J. Hester and L. Smith, ISGS



Elevations in feet above mean sea level



Miles



THE ILLINOIS BIG RIVERS SHADED ELEVATION MAP

THE ILLINOIS BIG RIVERS

AN INVENTORY OF THE REGION'S RESOURCES



JOEL DEXTER

The Great River Road (above) runs through majestic blufflands. Calhoun County's ferries (inset), once considered symptoms of the region's backwardness, today are symbols of its unspoiledness.



Northwest of the town of Grafton, just past Graham Hollow on the Great River Road, 26 miles and about a century from downtown St. Louis, the Brussels ferry shuttles drivers and their cars across the Illinois River to and from the “rugged kingdom of Calhoun” County. Though the peninsular county is virtually surrounded by waters of the Illinois and Mississippi rivers, only one state highway bridge connects it to the rest

of Illinois, and anyone wishing to enter it at other points must float across.

For years Calhoun County's ferries were taken as symptoms of the region's backwardness. Today they are symbols of its unspoiledness, proof that this part of Illinois has been exempted from the modernity that more and more visitors now come here to escape. To rural residents an essential service, the ferry at Grafton is advertised to

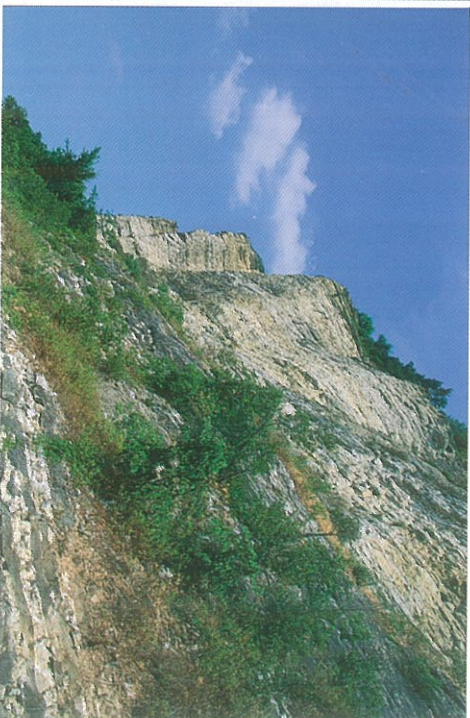
visiting urbanites as a “fun” attraction, a country carnival ride.

The Brussels ferry at once symbolizes the rural past and suburbanized future of Illinois' Big Rivers region. As used here, “Big Rivers” describes parts of five counties of west central Illinois near where the



JOEL DEXTER

The Illinois and the Mississippi rivers meet (above) near Grafton. Along the lower Illinois River (left) tower rugged hills and limestone bluffs, formed by lime muds deposited 320–500 million years ago.



JOEL DEXTER

lower Illinois River enters the Mississippi. Centered in Jersey, Madison, Greene, Calhoun and Macoupin counties, the Big Rivers region covers some 1,770 square miles. It includes parts of the basins of three large streams—the middle Mississippi, the lower Illinois, and Macoupin Creek—and takes in one of Illinois’ 30 “resource rich areas” identified by state scientists and other experts as being especially endowed with biologic resources.

Much of the region is broad prairie, growing on the Central Till Plain that dominates the middle U.S. The floodplains of the two big rivers

constitute a second distinct ecological realm. Along the lower Illinois River a bit of the Ozarks plateau intrudes in the form of rugged rocky hills and limestone bluffs formed from lime muds deposited at the bottom of ancient seas 320–500 million years ago, when Illinois basked on the equator. The Dividing Ridge, the massive hump of rock that separates the converging Illinois and the Mississippi, makes up southern Pike County and most of Calhoun County.

Such diverse terrain supports diverse ecologies. Several local habitats are unusual elsewhere in Illinois.

- Sixteen springs, such as the twin

The Area at a Glance

△ Centered in Jersey, Greene, Madison, Calhoun, and Macoupin counties, the Big Rivers region covers some 1,770 square miles and parts of the basins of the middle Mississippi, the lower Illinois, and Macoupin Creek.

△ Broad prairie covers parts of Macoupin and parts of Jersey counties. The floodplains of the two big rivers constitute a second distinct ecological realm. Along the lower Illinois River, a bit of the Ozarks plateau intrudes in the form of rugged rocky hills and limestone bluffs.

△ The Big Rivers region boasts several local habitats unusual elsewhere in Illinois—sixteen springs, fourteen caves, limestone cliffs, and many glades where bedrock protrudes at or near the surface of woods or prairie.



JOEL DEXTER

In presettlement times, 50% of the Big Rivers region was forest. Today it boasts nearly twice as much forest in percentage terms as the state as a whole.

springs that flow from the foot of McAdams Peak at Pere Marquette State Park where water trapped in fractured limestone bedrock escapes at the surface.

- Fourteen caves, and many glades where bedrock protrudes at or near the surface of woods or prairie.

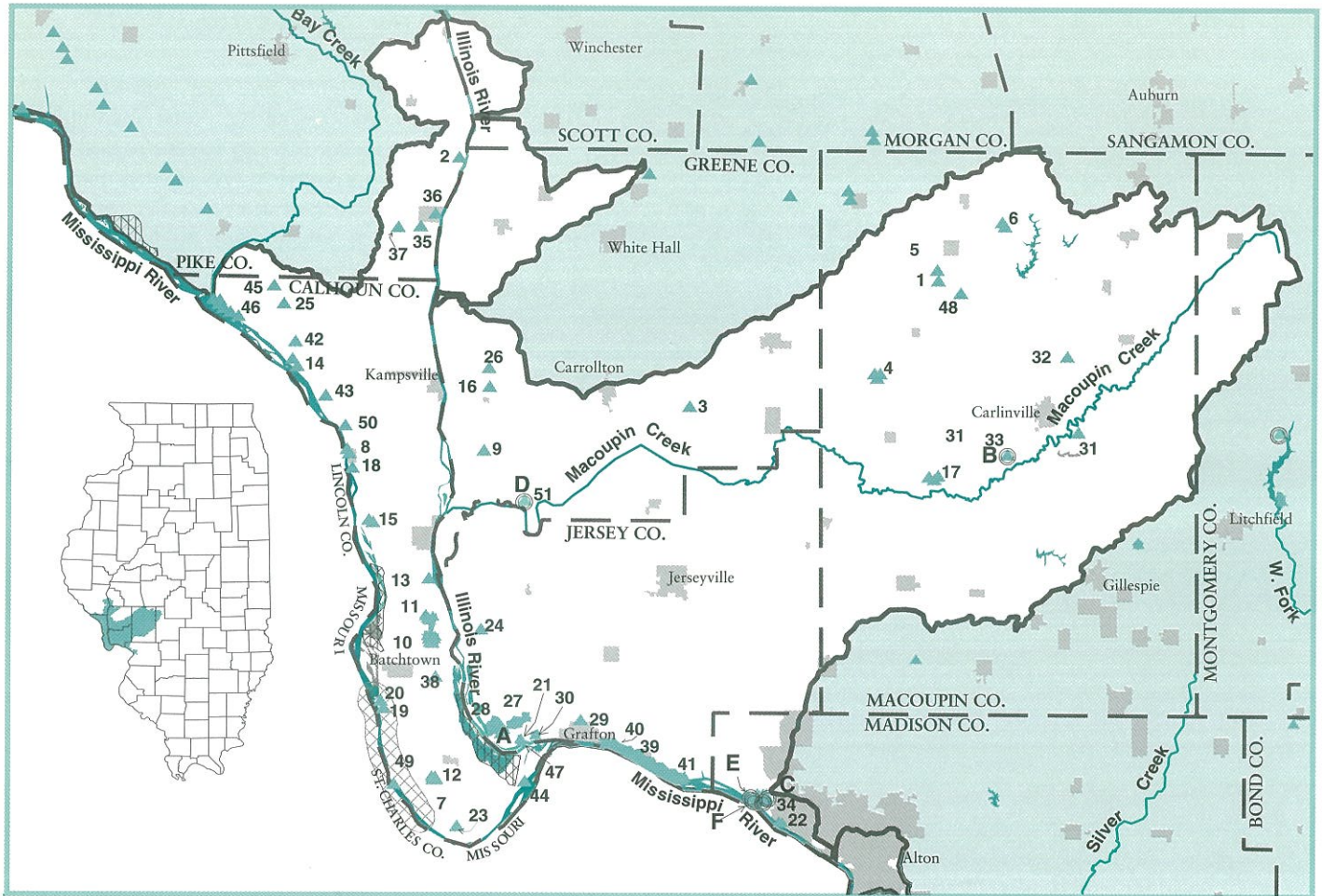
- Limestone cliffs whose plant communities vary according to how much sunlight each receives. Berry bladder ferns and columbine thrive in shaded parts, while baby lip fern and shadbush bask on sunny rock faces.

- Small temporary forest ponds free of egg-eating fish. Essential breeding places for many amphibians and

reptiles, such ponds also are among the rarest habitats in today's Illinois. One of the few is in the Big Rivers region at the John M. Olin Nature Preserve in Madison County.

The diversity of Big Rivers habitat hasn't changed much since presettlement days, although the extent of each habitat has changed enormously. Prairies covered the presettlement uplands, save where trees festooned the stream courses or huddled in groves in open prairie. On average, some 47% of the region was prairie when Euro-American settlers arrived in numbers. (Most of this was in the Macoupin Creek watershed,

BIG RIVERS



ILLINOIS NATURAL AREAS INVENTORY SITES AND
ILLINOIS NATURE PRESERVES IN THE BIG RIVERS AREA

ILLINOIS NATURAL AREAS

- 1 Chaney Woods
- 2 Pilot Knob Limestone Glade
- 3 Providence Woods
- 4 Hagaman Marsh
- 5 Solomon Creek Woods
- 6 Goode's Memorial Woods
- 7 Two Branch Hollow Hill Prairie
- 8 Swarnes Hill Prairie
- 9 Dayton Hollow Hill Prairie
- 10 Kamp's Glade
- 11 Mortland Glade
- 12 Krause Woods
- 13 Lead Hollow Glade
- 14 Riprap Landing Woods
- 15 McNabb Hollow
- 16 Shaffer Hollow Hill Prairie
- 17 Bullard Lake Club
- 18 Hamburg Southeast Geological Area
- 19 Cap Au Gris
- 20 West Point Landing Geological Area

- 21 Deer Lick Hollow Geological Area
- 22 Alton Geological Area
- 23 Golden Eagle Geological Area
- 24 Teneriffe School Geological Area
- 25 Wildcat Hollow North Geological Area
- 26 Eldred Caves
- 27 Pere Marquette Bald Eagle Habitat
- 28 McAdams Peak Hill Prairie
- 29 Distillery Hollow Glade
- 30 Brainerd Cave
- 31 Carlinville Geological Area
- 32 Carlinville Railroad Prairie
- 33 Denby Prairie
- 34 Olin Tract
- 35 Pearl Prairie Geological Area
- 36 Pearl Limestone Quarry
- 37 Twin Culvert Cave
- 38 Monterey School Geological Area
- 39 Principia Hill Prairies West
- 40 Chautauqua Prairie
- 41 Principia Hill Prairies East

- 42 Belleview Site
- 43 Mozier Slough
- 44 Royal Landing
- 45 Clarksville Island
- 46 Jennings Hill Prairie
- 47 Gilbert Lake
- 48 Etter Cemetery
- 49 Mississippi River—Cap Au Gris
- 50 Osterman Hill Prairie
- 51 McMaster Woods

ILLINOIS NATURE PRESERVES

- A Pere Marquette
- B Denby Prairie
- C John M. Olin
- D McMaster Woods
- E Oblate Father's Woods
- F Mississippi Sanctuary

- Biologically Significant Stream
- Mark Twain Nat'l Wildlife Refuge

which was about 73% prairie.) Overall, 50% of the region was forest, concentrated in Calhoun, Greene, and Jersey counties, about 60% of whose land was covered by forest of one kind or another.

It was the Big Rivers' valleys that gave early Europeans their first impressions of Illinois, traveling as they did by canoe. When French explorers paddled down the Mississippi River 300 years ago, its waters ran clear much of the year—a sight hard to imagine today. As for the early Illinois, Louis Hennepin called it “the Delight of America.” The river’s valley was defined by bluffs or hills topped with prairies. The bottomland was thickly forested with cottonwood, hackberry, ash, pecans, and other large trees, and all were draped in ubiquitous grape vines nearly a foot thick. This “Skreen [of trees . . . hides some very fine Meadows,” wrote a Jersey County traveler in 1721.

Those “meadows”—mostly wet prairie—covered some 40% of the Illinois’ capacious valley. Wetlands covered an estimated 20% of the region overall prior to settlement. Most of them were floodplain forest and the wet prairies that in places such as Greene County stretched as far as four miles from riverbank to bluff. This “marshey ground . . . overflow’d after great Rains,” according to a 1698 account. The valley was dotted by a network of sloughs and “lively emerald and silvery lakes.” It was a landscape that was as ephemeral as it was fecund; such interconnected lake-pond-slough complexes change configuration as water levels rise and fall, with some bottomland lakes disappearing every autumn and re-appearing each spring.

After some 200 years of Euro-American presence the living communities of the Big Rivers region are much changed. Wetlands today are markedly smaller in extent, covering 3.6% of the land area, or about the same as in Illinois as a whole. The wet prairie is virtually gone and only remnants of the bottomland lake system survive, as at Fowler Lake on the Illinois or along the stretch of the Mississippi from Clarkeville Island downstream to Batchtown. Roughly two acres of every five of presettlement forest (most of it open savanna-like woods) is gone; what is left is mostly dense, closed-canopy hardwood forest in Calhoun County (which is one-third wooded) and adjacent parts of Jersey County. About 100 acres of high-quality undegraded prairie (mainly hill prairies too steep to be plowed into farm fields) persist locally, as does some grassland (about 11% of the area) but most of the latter is in the form of roadside strips.

In the 1970s, the Illinois Natural Areas Inventory found 51 natural areas in the Big Rivers region that remained essentially unchanged from presettlement days. Combined, such sites amount to 572 acres or 0.05% of the area. The local loss of presettlement habitat, while substantial, was less severe than in Illinois as a whole, except for forests. While the Big Rivers region boasts nearly twice as much forest, relatively, as the state as a whole, only about 0.13% (358 acres) of local woods of any age are undegraded forest of high quality, and only 0.063% of the original forest survives in high-quality condition. Among other causes are decades of livestock grazing, which kills native plants of the forest floor and allows the spread of aggressive weeds that

The Area at a Glance

△ Some 47% of the region was prairie when Euro-American settlers arrived in numbers. About 100 acres of high-quality undegraded prairie persist.

△ Overall, 50% of the region was forest, concentrated in Calhoun, Greene, and Jersey counties. While today’s Big Rivers region boasts nearly twice as much forest, relatively, as the state as a whole, only 0.063% of the original forest survives in high-quality condition.

△ “Meadows”—mostly wet prairie—covered some 40% of the Illinois’ capacious valley. Wetlands of all kinds that covered an estimated 20% of the region prior to settlement today cover 3.6%.

△ In the 1970s, the Illinois Natural Areas Inventory found 51 natural areas in the Big Rivers region that remained essentially unchanged from presettlement days. Combined, such sites amount to 572 acres or 0.05% of the area. While substantial, the local loss of presettlement habitat is less severe than statewide.

The Visitors Center at Pere Marquette State Park in fall. The park's 179-acre preserve features five distinct plant communities. More than 234 species of birds and 19 species of mammals can be observed there.



JOEL DEXTER

thrive in ecologically disturbed settings. The recent discovery of garlic mustard in Calhoun County marks the first appearance of this especially vigorous interloper in the west central part of the state.

The outdoor zoo that astonished presettlement travelers is not quite so crowded today. For example, mussel fishermen today find fewer animals and fewer species—25 instead of 41. But animal life, although reduced in numbers, remains richly various in the

Big Rivers region. Ninety-nine fish species are known to still occur here, as are 25 mussel species and 21 species of crayfish, isopods, and amphipods (the latter are orders of aquatic crustaceans). Twenty-one amphibian and 47 reptile species are known or thought likely to occur in the region. These include the timber rattlesnake, the largest (up to four feet) venomous snake in Illinois. Estimates suggest that 45 of the 60–62 mammal species known in

Illinois dwell here. And largely because of its extensive tracts of upland and floodplain forest and riverine wetlands, the region is a haven for birds; at least 277 species (of the 310 that regularly occur in Illinois) may be found here.

As habitats dwindle, so do

the populations of the living things adapted to them. Three reptiles—the alligator snapping turtle, river cooter (a turtle), and massasauga snake—are probably already locally extinct in the region, as none of these animals has been caught or even seen in the past 50 years. The deep sloughs favored by the alligator snapping turtle, the lushly vegetated rivers and floodplain ponds preferred by the river cooter, and the wet prairies preferred by the massasauga snake have all been dramatically reduced in extent since settlement.

Of the Big Rivers' inventory of living things, two species of mammals, four of birds, two of reptiles, two of fish, three of mollusks, two of insects, and eight of plants are "special status" species, or species whose survival in the state is considered by experts to be endangered or threatened. The list includes the pallid sturgeon, a fish last seen in the area in 1904, and the bigeye shiner. The latter fish prefers clearwater creeks of the sort that have become rare in Illinois; the fish is reported in the Big Rivers region only from Piasa Creek,



Class A camping, picnic pavilions, and similar amenities drew 1.35 million visitors per year in recent years to Pere Marquette State Park. (IDNR Photo)

Because of its extensive tracts of upland and floodplain forest and riverine wetlands, the region is a haven for birds and for birders. (IDNR Photo)



The Area at a Glance

△ Animal life remains richly various in the Big Rivers region—99 fish species, 25 mussel species, 21 species of crayfish, isopods, and amphipods, 21 amphibian species, and 47 reptile species. Of the 60–62 mammal species known in Illinois, 45 dwell here.

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and may be extirpated. Forty-eight species of birds are either locally extinct or are only rarely present in the breeding season, perhaps because necessary breeding habitat such as grasslands is in scant supply. Among the plants, one of the important remaining populations of decurrent false aster in the U.S. is in the lower Illinois valley.

Nine special-status mussel species, virtually unknown except to scientists and a few fishermen, also are found in the region. (One admirer, the late Grafton nature writer, John Madson, noted that while a mussel can make a pearl, the best a human being can make is gallstones.) Because collectors have not found most of the nine species locally since the 1920s and '30s, they are considered extirpated from the region, although among the possible survivors is the very rare spectaclecase mussel.

Mammals tend to be much more adaptable to habitat change

than sedentary species such as mussels. The local list of special-status mammals includes two species rare in Illinois—the river otter and the bobcat—and the Indiana bat, which is rare in the U.S. The presence of the fastidious river otter is a barometer of environmental health, and a group of ten otters was seen in the Big Rivers region as recently as 1994-96.

Nearly 26,000 acres of the Big Rivers region is under public protection to varying degrees, for varying purposes, and under varying jurisdictions. The region encompasses six Illinois nature preserves, most of them clustered in the bluffs overlooking the rivers. The 179-acre preserve at Pere Marquette State Park features five distinct plant communities including prairies, forests, fern-draped limestone outcrops, and spring-fed streams; more than 234 species of birds and 19 of mammals are among the fauna observed there. The nearby John M. Olin Nature Preserve occupies steep limestone

Agriculture, an essential local industry, is a major cause of landscape alteration.

bluffs; sink holes, ravines, bedrock outcrops, and a waterfall diversify its dry forest and hill prairie habitats.

The several divisions of the Mark Twain National Wildlife Refuge take in a total of 8,000 scattered acres along the Mississippi. Most of these are backwater lakes, managed to provide resting places and food for migrating waterfowl. The Mississippi Fish and Wildlife Area consists of 15 wildlife management areas and 13 public access areas covering 24,400 acres, most of it owned by the federal government but managed by the Illinois Department of Natural Resources. These provide habitat for a large number of birds and other animals, including the bald eagle, still considered a threatened species in the U.S.

Human Presence

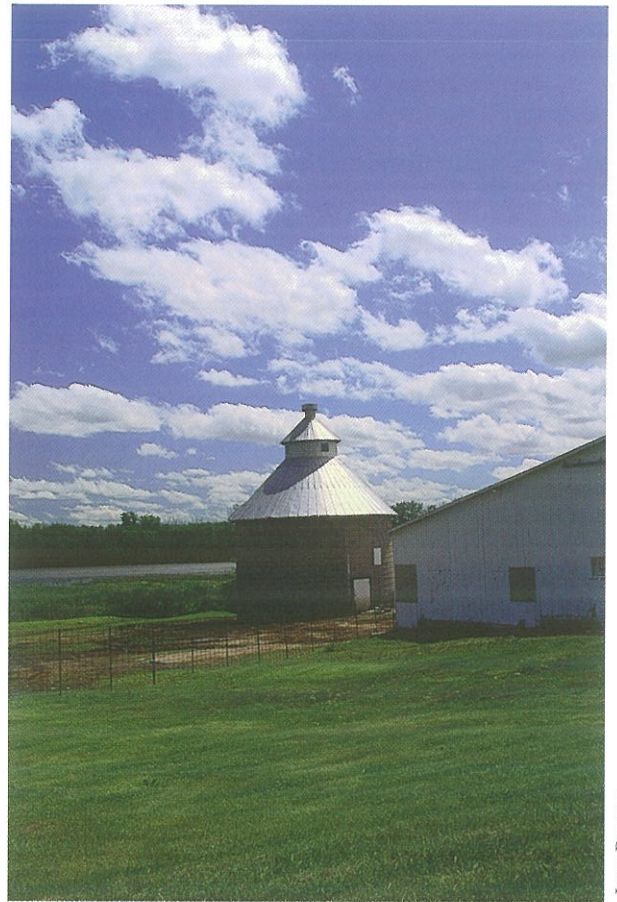
As tends to happen wherever they live in numbers, humans have become the ecologically dominant creature in the Big Rivers region.

Native Americans are thought to have altered the balance of forest and grasses by burning the prairies, and to have hunted several large mammals into extinction. Euro-Americans have likewise altered the natural systems of the region to suit necessary economic ends, with various consequences.

Usually when people think of the contemporary human impact on nature, they think of pollution. Because most of the Big Rivers region is predominantly rural, with no major concentrations of industry, it is relatively untroubled by conventional pollutants. However, available data is limited about the risks from unpermitted landfills, Superfund sites, surface impoundments, sites of long-vanished factories, mined-out areas, and so on. Acid runoff from abandoned mine sites is a problem in places (mainly Macoupin County). In much of the Illinois valley, agricultural chemicals are applied directly to

the floodplain and thus are readily available to be carried into that stream. In parts of Calhoun County, farm chemicals can easily enter some aquifers via erosion-exposed bedrock.

Pollution has had less profound ecological effect in the area than has physical change to the landscape. Grazing by cattle and other livestock kills many species of forest plants. Removing trees and other bankside vegetation to expand farm fields over-warms streams. Building drainage ditches speeds the flow of water from land into streams, aggravating flooding. Straightening natural streams so they act as drainage



JOEL DEXTER



JOHN SCHWEGMAN

About 100 acres of undegraded prairie (mainly hill prairies too steep to be plowed) persist in parts of Jersey County.

The Area at a Glance

△ The presence of the fastidious river otter is a barometer of environmental health. A group of ten otters was seen in the Big Rivers region as recently as 1994–96.

△ Nearly 26,000 acres of the Big Rivers region is under public protection.

△ Navigation dams have transformed the Big Rivers, in effect, into a series of big lakes.

△ Fragmentation of habitat is a problem here as elsewhere in Illinois. The average size of contiguous forested wetlands is 17.4 acres. The mean size of emergent wetlands such as marsh is 2.4 acres. Such isolated habitat fragments often cannot supply the resources needed by species with more extensive home ranges.



JAMES P. ROWAN

The list of mammals that are rare in Illinois includes the river otter.

ditches has the same effect. (Virtually all of Macoupin Creek west of Carlinville has been “channelized” in this way.) The surface above old mined-out works is vulnerable to subsidence when coal pillars supporting roofs eventually collapse or sink into soft foundations.

The Mississippi and Illinois rivers no longer carry wooden flatboats loaded with salt pork and whiskey down to St. Louis and New Orleans. Today’s flatboats are massive barges nine feet deep, 35 feet wide, and 195 feet long, lashed together into tows three barges across and five deep. They move grain, oil, coal, and building materials on streams engineered from free-flowing rivers into “waterways” built for the purpose. On both the

Mississippi and the Illinois, a series of dams backs up water to create pools of sufficient depth to float these behemoths.

The Big Rivers in effect have been transformed into a series of big lakes. Much varied riverine habitat in the form of shoals, bars, and rapids has been eliminated. Dams act as silt traps by slowing currents; the smothering of the river bottom by silt has greatly reduced benthic diversity. And when species go locally extinct, dams prevent repopulation by animals from another part of the river. The powerful tugboats that propel the tows generate wakes that chew away at banks and muddy the water by resuspending sediments, increasing the turbidity that hides prey from predator and cheats water

Archeology

Aboriginal peoples made the Big Rivers region home during successive cultural eras as Native American lifeways changed from nomadic hunting and gathering to sedentary horticultures. (Prior to its construction in the 1930s and again during its expansion in 1985, excavations at the Pere Marquette State Park lodge site confirmed that the human prehistory of the park dates back at least 10,000 years.) Several Big Rivers sites have lent their names to artifacts dug up there, such as the Jersey Bluff pottery style. One of the signal artifacts of Midwest prehistory was found here—the Macoupin Creek Figure Pipe, a stone effigy carved from reddish-brown bauxite or fireclay from eastern Missouri. Several sites of the Middle Woodland era are so important that they are listed in the National Register of Historic Places.

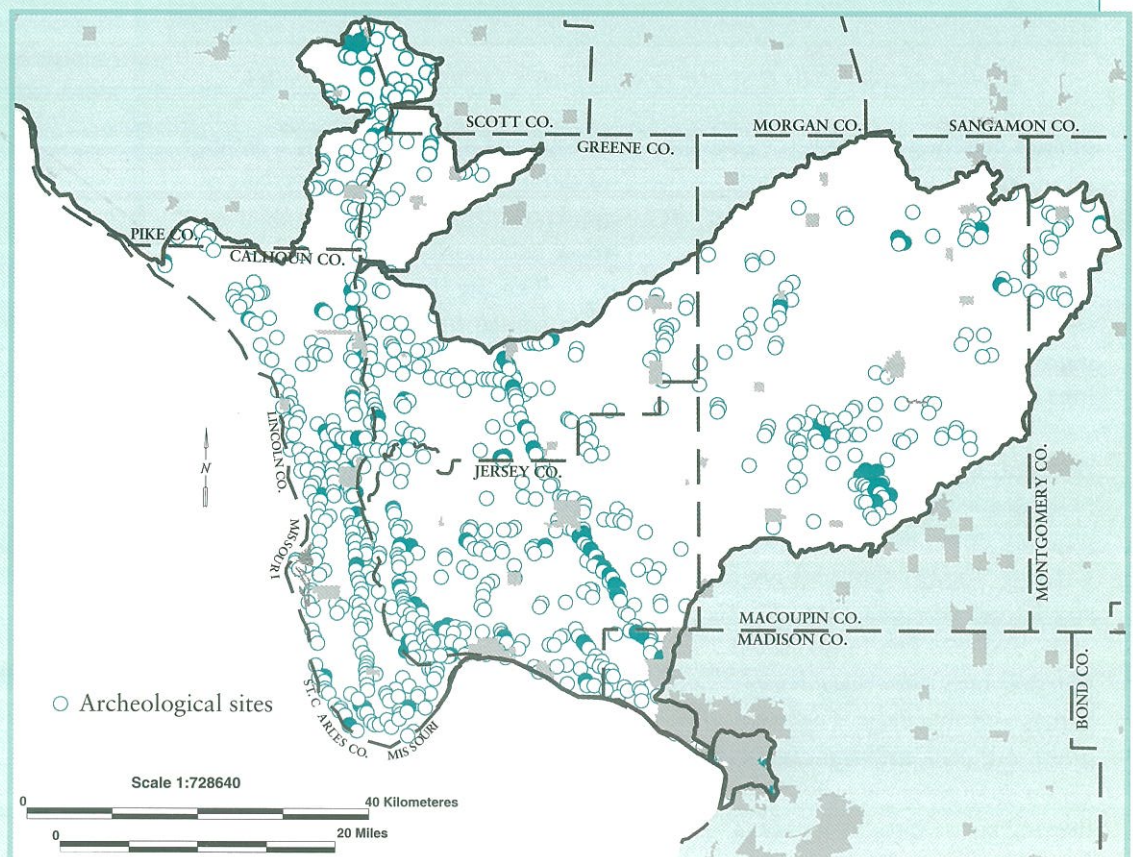
The resulting record of archeological remains—pottery fragments, stone tools, weapons points, and domestic debris buried in burial mounds, villages, hunting and fishing camps, temporary factory sites for tool production—is as extensive as it is valuable. Even though less than 3% of the area has been surveyed, nearly 2,000 sites have been recorded from all time periods through the present. In parts of the valley, Late Woodland settlements number in the hundreds. Along the Macoupin Creek valley, burial mounds line the bluffs.

On the Koster farm in Greene County, it took twelve years of excavation to recover Archaic and Woodland remains from 8,500 to 900 years ago—layer on layer of records more than 35 feet deep. The Koster site is an archeological landmark in the Native American occupation of North

America. The excavation of the site (six miles south of Eldred) stimulated a tourist mini-boom in the 1970s; a visitors center opened by the Center for American Archeology at nearby Kampsville draws visitors to exhibits detailing the history and prehistory of the lower Illinois valley.

Koster is the best known of the Big Rivers excavations, but not the only one. Professional excavation continues at many sites. In the Crawford Creek drainage south of Koster is evidence of Late Woodland peoples during crucial transition to the bow and arrow and corn, bean, and squash gardening. Artifacts from sites on the Wood River Terrace and adjacent uplands in southern Jersey County suggest more complex levels of social organization.

Archeology has become a popular form of educational tourism. In addition to exhibits, the Center for American Archeology also offers workshops in flintknapping, basketry, even bone science to laypeople and students who wish to achieve a deeper knowledge of the Big Rivers region.



plants of light. The deepening of water forced the retreat of shallow-rooted aquatic vegetation needed as shelter and food by river creatures.

Changes in the Landscape

Away from the rivers, the construction of roads, fields, and houses divides forest, wetland, and prairie into habitat “islands.” The average size of contiguous forested wetlands in the Big Rivers region is 17.4 acres. The mean size of emergent wetlands, such as marsh, is 2.4 acres. Such isolated habitat fragments often cannot supply the resources needed by species with more extensive home ranges. The entire local populations of some plant and animal species in these tracts may consist of only a few individuals; the smaller such local populations, the more vulnerable they usually are to disease and in-breeding stress. Prairie remnants and other grasslands are generally too small to sustain breeding populations of grassland birds such as the short-eared owl.

Not all species need large chunks of contiguous habitat; the western chorus frog, for example, does well in patches of cattail marsh smaller than one acre. However, habitat connectedness matters for other amphibians. Toads venture from upland woods to lower, wetter areas to breed, and timber rattle snakes move from lowland foraging areas to upland retreats to hibernate.

Habitat fragmentation is an issue across Illinois. Happily, the Big Rivers region is different in that the problem facing managers is how to prevent fragmentation, not just cure it. The large forests around the confluence of the Illinois and the Mississippi are among the last sizeable wooded tracts in this part of the

continent. Many bird species are thought to have declined elsewhere in the Midwest because habitat fragmentation leaves them vulnerable to predators and nest-stealing competitors. The Big River’s rich breeding grounds produce enough surplus birds to repopulate them.

Stopping fires, unlike plowing, results in no immediate change in the landscape. But without periodic fires to kill them, understory plants shade forest floors, which reduces the numbers of species there. In dry forests, the closing of the canopy of trees overhead leads over time to increases in the relative populations of sugar maples and the retreat of sun-loving oaks. Unburned prairies are overtaken by trees or cool-season exotic grasses like meadow fescue; unburned oak savanna converts to closed forest. Hill prairies have suffered steep declines over the past 50 years here as elsewhere, mainly because they were overrun with woody plants that used to be kept at bay by naturally occurring fires.

In general, exotic species of all kinds from Europe and Asia often adapt better to Illinois’ humanized environments than do natives. Starlings compete with native birds for nesting cavities in all major Big Rivers habitats. Four of the most populous birds in farm areas—rock dove or pigeon, European starling, house sparrow, and ring-necked pheasant, the last a much-sought game species—are not natives. Zebra mussels are a more recent threat to native mussels in larger rivers like the Illinois and Mississippi. However, introduced species do not all cause ecological havoc. A large plantation of black locust trees in Pere Marquette State Park hosts many unusual breeding birds, such as the black-throated green warbler.

The Area at a Glance

△ The large forests around the confluence of the Illinois and the Mississippi are among the last sizeable wooded tracts in this part of the continent—rich breeding grounds that produce a surplus of birds to repopulate nearby areas.

△ Hill prairies have suffered steep declines over the past 50 years, mainly because they were overrun with woody plants that used to be kept at bay by naturally occurring fires.

△ At the peak of Illinois’ row-crop production in the 1970s and ‘80s, soil loss from some land was estimated to be 10–20 tons per acre per year. Erosion rates have declined since, due to conservation tillage, government-paid “set asides,” and declines in the amount of land farmed.

Floods

Floods have been disrupting human enterprise in the Big Rivers region since at least the early 1800s, when "the great high water" along the Illinois drove out a colony of French trappers at Deer Plains Ferry in Calhoun County. Low-lying lands along the Illinois River are vulnerable not only when the Illinois floods but when the Mississippi floods too, because the larger stream pushes water back up its tributary's channel. Even a swelling Missouri River, which empties into the Mississippi a few miles downstream from the latter's juncture with the Illinois, can swell the Mississippi enough to raise water levels on the lower Illinois.

The long-term average flow on both rivers has been noticeably greater since 1970. This finding is consistent with increased precipitation (especially fall precipitation) in the Big Rivers region watersheds. The year 1993 was the wettest on record. All three rivers were at record flood, and floodplain towns like Grafton suffered devastating damage to buildings. Levees and adjacent farm fields upstream also were severely damaged.

While climate remains the driver of floods, the frequency and intensity of flooding can be affected by human changes to a river's watershed. The draining of

wetlands, deforestation, farming, and modifications to natural drainage systems along the Mississippi and the Illinois have been considerable. Deforestation increases surface runoff. Levees force flood water that used to abide in floodplain lakes to stay in the main channel, increasing water depth. "Spike floods" result when Illinois' typical heavy spring and summer thunderstorms are funneled into rivers by field drains and ditches rather than soaking into the soil. Because of such changes, it takes less precipitation than it used to to make a river overflow.

Natural systems are designed to survive such inundations, but they are not immune to harm. In the 1993 flood, because water intruded into higher areas and stayed longer than usual at the confluence of the Illinois and Mississippi, there was considerable tree death among species not adapted to inundation. An estimated 32% of the mature (mostly younger) trees of all species in the affected areas died, along with 80% of the shrubs. Even species ordinarily tolerant of immersion such as hackberries (a preferred feeding tree for fall migrant birds) died in large numbers.

Such occasional die-offs do not kill the forest, but they do change it. New openings in the canopy allow in light, stimulating willow thickets that shelter shrubland birds and altering the local species composition of both plants and animals. As happens in nature, the old forest died but a new one took its place.



*Flooding in East Alton
August, 1993*

JOEL DEXTER



White-tailed deer were so scarce at the turn of the century, hunting was banned. Reintroduced to Illinois in the 1930s, the deer have become plentiful again. Hunters in the Big Rivers area took more than 9,700 deer in 1993.

Agriculture is another essential local industry that is a major cause of landscape alteration. Most obviously, the region's original prairies were plowed, and most of the bottomland lakes on both rivers were drained to make them farmable. More recently, the widespread planting of soybeans instead of pasturage and forage crops deprived animals adapted to grassy habitats (especially grassland birds) of viable, if not pristine habitat.

Most of the nearly 39 inches per year of precipitation that falls in the Big Rivers region falls as heavy rains during thunderstorms. The region's soils are mostly derived from loess (pronounced "luss"), wind-blown silts that carpeted glacial deposits as the ice retreated. Loess-based soils are easily dislodged by such pummeling. The potential for erosion on most local soils thus is moderate to high, especially along narrow ridgetops. (In contrast, the former prairies in eastern

Macoupin County slope less than 7%, and so are less prone to erosion.) The region's uplands lost perhaps half their topsoil over the past century; the valleys actually accumulated 20 inches or more of new soils in the same period.

At the peak of Illinois' row-crop production in the 1970s and '80s, soil losses from the region's more vulnerable lands were estimated to be 10–20 tons per acre per year. However, erosion rates have declined in recent years, as they have across Illinois, due to changes in farm practice such as conservation tillage, government-paid "set asides" of erodible land, and declines in the amount of land farmed that followed declines in grain prices.

Some of humans' less welcome ecological changes can be, if not reversed, at least reduced with informed management. White-tailed deer gathered so plentifully at spots along the presettlement Mississippi

The Area at a Glance

△ While the region's larger streams cannot be simply returned to their presettlement state, many smaller local streams may restore themselves if streamside vegetation is replanted.

△ White-tailed deer are again present in huntable numbers after being locally extinct, and wild turkeys also have been successfully reintroduced to the area.

△ Almost 70% of the land in the Big Rivers region is devoted to farm crops or grasslands.

that they could be shot by early hunters from canoes. By the 1870s, however, an old settler of Pike County lamented in a speech, "The time will soon come when fish and game will be so scarce as to be within the reach of only the wealthy." By the early 20th century heavy hunting and the loss of forest caused such a severe population crash that the animals were at or near extinction in Illinois, and in 1901 hunting was banned across the state. The white-tailed deer was reintroduced to Illinois in the 1930s, and now is common everywhere; hunters in the Big Rivers region alone took more than 9,700 deer in 1993.

Ecologically informed management has the potential to improve several impaired Big Rivers habitats. For example:

- While the region's larger streams cannot be simply returned to

their presettlement state, restoration of many smaller streams is fairly straightforward, in the opinion of state ecologists. If streamside vegetation is replanted, many local streams will restore themselves.

- The short grass of mowed roadsides near Pere Marquette State Park are perfect feeding grounds for cowbirds that parasitize songbird nests inside the park; allowing mowed grasses to grow taller at key times in the cowbird's life cycle would reduce their numbers.

- Burning the forest understory favors oak trees, which in turn favor Cerulean warblers and other spring migrant birds, and the tree and flying squirrels that eat their acorns.

- "Moist-soil" units managed for waterfowl can be drawn down in spring and fall to create excellent shorebird habitat for nongame birds.

- Small stock and farm ponds

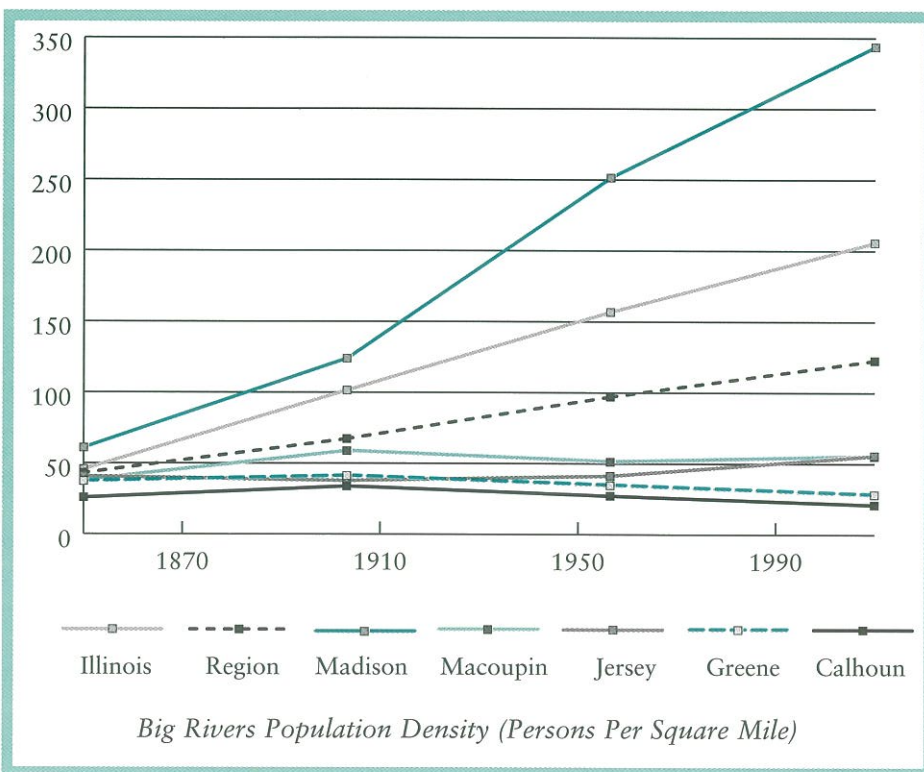
that are too small to support sport fish can provide important breeding sites for amphibians.

- Wild turkeys already have been successfully reintroduced to the area, and breeding populations of peregrine falcons could be re-established on the cliffs they once frequented along the Mississippi River.

Life in the Big Rivers Area

Small towns and farm hamlets are the common forms of human settlement in the Big Rivers region. People and jobs are concentrated in its southern urbanizing fringe, where nearly 80% of the region's personal income is earned. The region as a whole has less land in urban uses (less than 3%) than does Illinois as whole. Calhoun County is one of the more perfectly rural parts of Illinois, having no urban population according to U.S. Census definitions.

The Big Rivers region has most of the problems common in such areas—a declining tax base, relatively old housing stock, an aging population, modest per capita income (\$3,500 lower than the state as a whole in 1990), and a declining economic base. In the past 120 years Calhoun and Green counties have lost a fifth and a quarter of their populations, respectively. Jersey and Macoupin counties' growth in that time of 36 and 46% is well below (barely a tenth in fact) the statewide average for the period. Only Madison County, fed by a spillover of population from metropolitan St. Louis, has significantly more people in it than it did a century ago. That county grew fivefold from 1870 to 1970, although in the past 20 years its population has



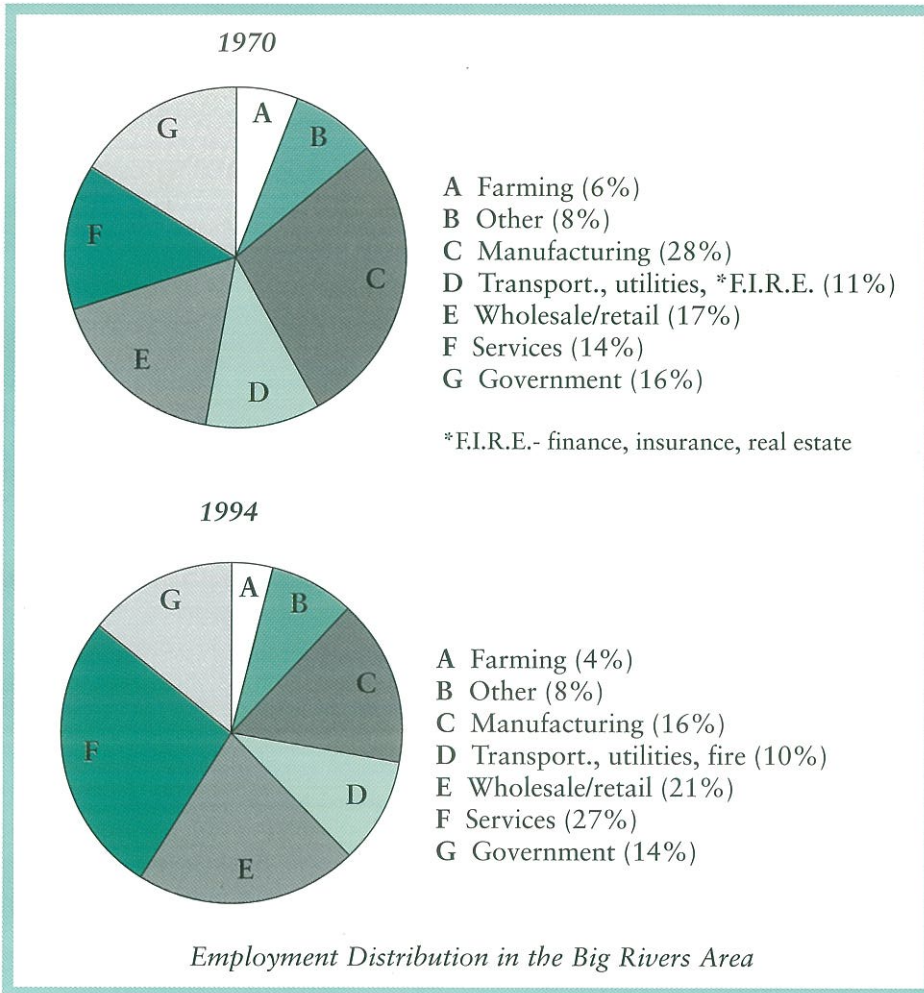
The Area at a Glance

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△ Calhoun County is one of the more perfectly rural parts of Illinois, officially having no urban population.

△ Since 1870 Green County has lost a quarter of its population, and at 36 and 46%, Jersey and Macoupin counties' growth was barely a tenth the statewide average. Madison County, however, has significantly more people in it than it did a century ago as a result of spillover from metropolitan St. Louis.

△ Calhoun and Greene counties remain disproportionately dependent on farming compared to Illinois as a whole, with 19 and 28% of the local jobs in agriculture. However, farm employment has dropped by a third since 1970 as the number of farms and farmland acreage has declined.



stabilized at about a quarter-million people.

With scant industry and too few people to sustain retail and service enterprises, Calhoun and Greene counties remain disproportionately dependent on farming compared to Illinois as a whole, with 19 and 28% of their local jobs in agriculture. Almost 70% of the land in the Big Rivers region is devoted to farm crops or grasslands, including orchards. Land too rugged for row crops supports fruit trees. Seventeen percent of Illinois' orchard acreage is located in the Big Rivers region, which occupies only 3% of the state's land. Calhoun County growers have taken advantage

of the region's longish growing season—a month longer than in far northwestern Illinois—to make that county one of Illinois' top producers of apples and peaches.

However, jobs in the sector are drying up. Farm employment dropped by a third since 1970. The number of farms shrunk by 26% from 1978 to 1992. Farmland acreage has declined too—11% from 1978 to 1992—and total cash receipts from farming have declined steadily, if unevenly, across the region since 1980.

In the urbanized south, manufacturing is less dominant too. (Madison County alone lost 11,000 blue-collar jobs since 1980.) Manufacturing jobs

The picturesque Hotel Del Mansion is in Jerseyville, where the annual Victorian Fest and Civil War re-enactment take place at summer's end.



KEITH D. WEDOE



KEITH D. WEDOE

“Stone” of a different sort—coal—has been mined locally for decades, and three coal mines in eastern Macoupin County removed nearly 5.5 million tons in 1996. But while locally important, none of these industries is large enough to retard the regional trend toward services as a source of jobs.

Among the growing service sectors is recreation. With bluffs for camping, hiking, and horseback riding and open water for boating, the region offers more for the active outdoorsman than all but a few places in Illinois. Class A camping facilities, picnic pavilions, and similar amenities drew 1.35 million visitors per year in recent years to Pere Marquette State Park alone. When the Beaver Dam State Park in Macoupin County focused facilities and management toward family fun, attendance nearly trebled over 15 years, to 344,000 people in 1996. In all, the region's big parks and wildlife refuges generate \$320 million in economic output;

are being replaced by service jobs more typical of St. Louis's suburbanizing periphery. Services and retailing have boomed—up 200 and 59% respectively. In Madison County, colleges and medical facilities rank with factories among the largest employers, and Macoupin County's Wal-Mart store ranks with a coal mine among the largest local employers.

These shifts mark a further

reduction in the region's historic dependence on the extraction of natural resources. Its large blocks of upland oak-hickory forest once attracted logging firms and lumberjacks, who added a romantic and boisterous chapter to local histories. The bluffs were and remain commercially viable sources of building materials; in 1996 the Big Rivers region had ten active limestone quarries.

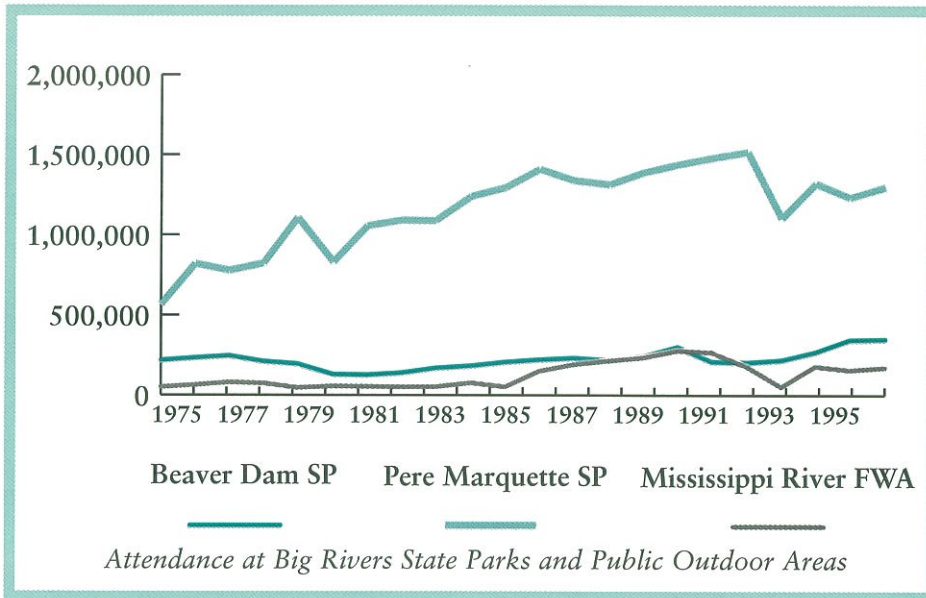
The Area at a Glance

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△ Manufacturing and farming jobs are being replaced by service jobs. In Madison County, colleges and medical facilities employ as many people as big factories, and Macoupin County's Wal-Mart store ranks with a coal mine among the largest local employers.

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△ The region's share of fishing and hunting license sales is well above its share of the state population. Calhoun County has 140 registered boats per 1,000 residents—also higher than the state average—and marinas now vie with barge facilities for space on the Mississippi.



antiques shopping, festivals, and other entertainments add to the take.

The region's share of fishing and hunting license sales is well above its share of the state population. (Because of the proximity to Missouri, out-of-state license sales also are higher than the state average.) It was probably never true, as a Jesuit missionary reported in 1712, that swans, cranes, geese, and ducks on the Illinois fed so luxuriantly on wild oats that they suffocated from their own fat. Still, the region offers the hunter abundant waterfowl. Hunters also have taken some quarter-million squirrels per season in recent years.

Navigation dams tamed what early travelers found as the "frightfully strong current" of the Mississippi. Alton Lake—actually Pool 26 of the river waterway—is a boater's mecca. A comprehensive list of the species of boats that partake of the summer season on Pool 26 rivals the list of local fish species in variety and length. Calhoun County has 140 registered boats per 1,000 residents—higher than the state average—and marinas

vie with barge facilities for space on the Mississippi.

The broad cultural shift toward more passive consumption of nature has expanded potential uses for the Big Rivers' resources. Tourism offers new ways to "harvest" trees by offering views of them to tourists who drive the back roads in the autumn looking at leaves. Modern visitors find the road between Alton and Grafton no less "a scene beautiful, grand, and sublime" than did the 1819 tourist who wrote those words. The difference is that there are many more of those tourists than there used to be. Indeed, the profusion of bed & breakfast inns, antique shops, and tourist buses found along winding country roads makes the Big Rivers region sometimes seem more like New England than Illinois.

Preserving Traditions

The region is uniquely endowed to exploit Americans' new appetites for nature lore, authentic history, and rural escapes. Its small towns are a welcome alternative to suburbanized

Elsah, says a local tourism brochure, has “few modern buildings to spoil the quaint atmosphere.”



JOEL DEXTER

environments that lack personality and sense of place. The draft horses on display at a historic farm in Jersey County are to city dwellers as exotic a bit of fauna as a bison or elk. The demand for rural experience by disaffected urbanites has spawned new versions of old rural commerce, from pick-your-own fruit orchards and cut-your-own-Christmas tree farms to roadside food stands. No doubt many of these products are bought as souvenirs, thus feeding more than one of the appetites of city dwellers.

Virtually anything that does not smack of the contemporary, the artificial, and the urban finds an eager audience. Harried homemakers still define the good life in terms of traditional dishes made from fresh-picked berries and homegrown vegetables, even if they no longer have the time or the skill to prepare them for themselves. The Elsay Landing Restaurant in Elsay, an hour from St. Louis,

astutely advertises its fare (such as breads made from scratch) as alternatives to instant foods.

The region's isolation has been the key to the character of the land and its people. A traveler dubbed the valley of the Illinois River “the empire of solitude” in 1817, but the name fits even today. Calhoun County is crossed by no interstate highways and no railroads; cut off by water in all directions save the north, its only connections to the rest of the world are a lone bridge from Hardin to East Hardin, Illinois, and four ferry crossings. But in 1994 the new Clark Bridge provided multilane auto access to the northern edges of metropolitan St. Louis, and the Illinois Department of Transportation is developing plans to connect Alton to the St. Louis interstate network.

Commerce always follows transit. The first businesses along the Illinois were woodchoppers, who

The Area at a Glance

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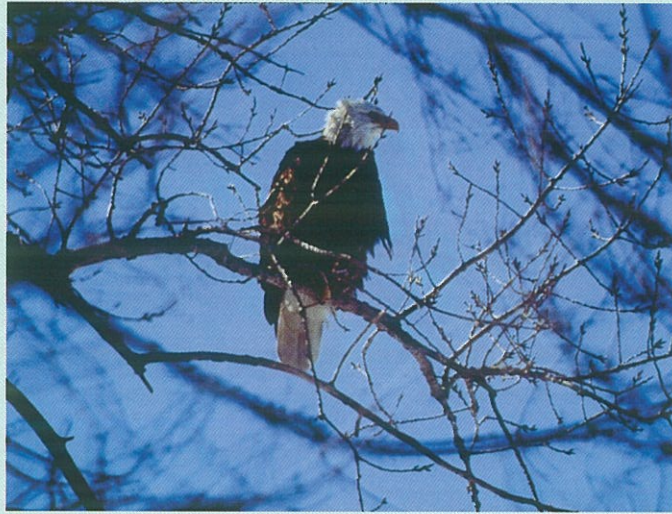
△ The region's isolation has been the key to the character of the land and its people. But in 1994 the new Clark Bridge provided multilane auto access to metropolitan St. Louis. The new roads and bridges will open the interior to settlement as surely as steamboats opened its river towns in the 19th century.

△ Seventeen percent of Illinois' orchard acreage is located in the Big Rivers region, which occupies only 3% of the state's land. Calhoun County is one of Illinois' top producers of apples and peaches.

△ The shift from manufacturing to tourism created a new identity for Alton, and helped rejuvenate an aging economic base.

Eagles

A bird up to three and a half feet long whose wings spread as much as seven and a half feet is a sight worth going out of one's way to see. Thousands do just that every winter in the Big Rivers region. The wooded bluffs that overlook the Mississippi and Illinois rivers are excellent winter habitat for the American bald eagle. The birds roost here while they gorge on river fish before moving north to spring nesting grounds in northern Minnesota, Wisconsin, and Canada, where they breed and raise chicks. Eagles can be seen in the Big Rivers region from mid-December through early March, depending on the weather, although the numbers peak in January and February.



About 200 birds were present in the 1980s, but by the late 1990s as many as 400 gathered along the rivers. The increase is due at least in part to protection efforts in the bird's nesting areas and to the gradual reduction of DDT and other pesticides in the food chain. Also, from an eagle's point of view, human manipulation of the big rivers has rather improved on nature. The eagle's noble visage

belies the fact that it is more a scavenger than a hunter. Turbulent waters below the navigation dams do not freeze, and floating fish stunned by being hurled over the dams are easy pickings for the big birds.

Human flocks of sightseers have grown with those of the eagles. The birds have no more fervent fans than hotel keepers and tour operators. The eagles' arrival fills out the Big Rivers calendar of seasonal attractions that begins with spring apple blossoms, summer water-sports, and fall leaf shows. For example, the newly refurbished Rubbel Hotel in Grafton, which commands a view of both big rivers, is packed come eagle season. Eagle-watching bus tours, complete with guides, are organized

not only by nature lovers but by the local convention and visitors bureau.

Historically, eagles resided in Illinois year around, and bred throughout the state. While it is unlikely that eagles will ever be as common a sight on the big rivers as starlings on a wire, the bird may sometime again take up year-round residence.

supplied the hungry boilers of the riverboats. The newest roads and bridges will open the interior of the Big Rivers region to settlement in the late 20th century as surely as steamboats opened its river towns in the 19th. Real estate agents in the Madison County town of Godfrey already tout the area's "slower pace of life and the lovely bluffs" to homebuyers craving rural quietude and scenery. The local chamber of com-

merce advertises the greater Alton area as offering "rural living in a suburban setting."

No landscape change poses more pressing management challenges to the Big Rivers region of the future than urbanization. Well-managed gaming, eco-tourism, retailing, and entertainment are quintessential "clean" industries. But among its other impacts, construction of the quasi-estates favored by buyers look-

ing for "country close to town" (as one local firm advertises) fragments wooded habitat and introduces household pets that harass ground-nesting birds.

An interesting question is whether the Big Rivers region can exploit its exemption from postwar suburbanization without giving it up. What the rest of the Big Rivers region faces in the 1990s and beyond, Alton faced a generation



JOEL DEXTER

The founder of the Jersey County town of Elsay gave away lots to newcomers on condition that they build on them with stone, perhaps in the hope that Elsay would achieve by sheer mass a permanence that eluded so many other new towns in old Illinois.

ago. Locals like to say that Alton is different, and indeed it is. Like the rest of the Big Rivers region, Alton departs from most Illinois towns in its dramatic topography. The commercial town is on a broad flat near the river, surrounded by steep bluffs on which the residential town took root. Elizabeth Farnham, visiting in 1840, noted that Upper Alton—once a separate town, annexed in 1911—“has some points that, transferred to canvas, would bear comparison with the boasted scenery of the old world.” Alton was for decades the center of an industrial economy but by the 1950s many of its manufacturing plants had grown obsolete and were shut down. Fortunately its parks and fine old houses still commanded a market. They were discovered by young urban refugees who commuted to jobs in St. Louis or at the newly expanding Southern Illinois

University at nearby Edwardsville; others opened small businesses. Spurred by the newcomers, local preservationists got three neighborhoods—Christian Hill, Middletown, and Upper Alton—and 11 buildings placed on the National Register of Historic Places.

Alton was not the only Big Rivers town to make a new economy out of old parts. Intact 19th century villages are as rare as extant prairies. The founder of the Jersey County town of Elsay gave away lots to newcomers on condition that they build on them with stone, perhaps in the hope that Elsay would achieve by sheer mass a permanence that eluded so many other new towns in old Illinois. After thriving briefly as a river port, Elsay stagnated economically; the lack of growth removed any reason to “improve” the original town for decades.

The Area at a Glance

△ The village of Elsay was successfully nominated for the National Register by locals who realized in the 1960s that things that no longer could be built today would be irresistible products in the market of tomorrow.

△ While Calhoun and Greene counties lack a fully developed modern economic infrastructure, they boast an unmatched natural infrastructure in the form of bluffs, forests, backwater lakes, views, and wildlife.

△ The region is uniquely endowed to exploit Americans' new appetites for nature lore, authentic history, and rural landscapes.

The Piasa Bird

In 1673 the French explorer Marquette was amazed to see, scrawled on the river bluffs upstream from Alton, "two painted monsters," two renditions of a single fantastic creature. Until the pictographs were gradually destroyed by vandals and quarrying in the mid-1800s, they attracted curious observers who saw in them a veritable bestiary of presettlement Illinois. Different accounts saw the monsters as having the antlers of deer (or more grandly, elk), a fish's tail, scales like a snake, the head of a fox or the head of a bear. Some versions gave it the body of a bird, in others that of a fish; all versions had a serpent-like tail. Some observers described it as having wings, leading some to liken it to an eagle; others likened it to a hippopotamus, even a tiger.

The modern tourist knows it as the Piasa Bird. Virtually everything about the creature is in dispute—its name, its meaning to the people who painted the original, its actual features. Why, for example, is it known as the Piasa *bird*? Its wings—if it had wings—no more make it a bird than its tail makes it the Piasa Snake. While the Thunder Bird figured prominently in the spiritual customs of the Dakota Sioux, the Mississippi River figure is just as plausibly one of the "medicine animals" of the Winnebago.

In its most fanciful version, "piasa" to the Illini Indians means "the bird that devours men." The legend holds that this monster regularly swooped down and devoured Indian braves until the brave Chief Ouatoga

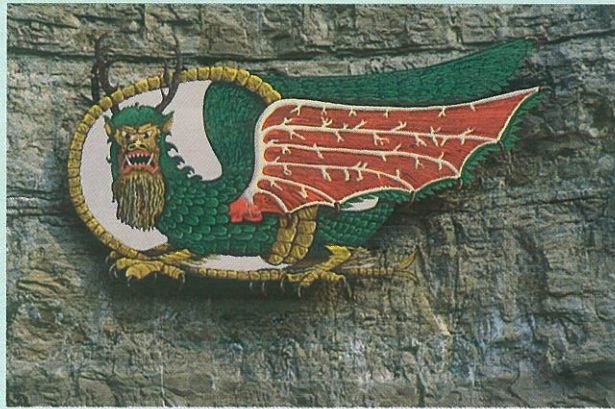
lured the monster into a deadly trap. An embellishment adds that the bird only ate serpents, which it would catch and take back to its cave to eat, until warriors fighting nearby shed their blood on the ground, exciting a taste for human flesh.

Eagles did occasionally prey on snakes—the timber rattlesnake finds the limestone ledges of the Big Rivers region a perfect home—and they also would eat carrion of dead warriors. Possibly the image recalled no such specific incidents, but was a shaman's vision, or even a warning of rough waters on the river ahead. Part of the appeal of the figure is that everyone who sees it may supply his or her own explanation.

Whatever its significance to the people who made it, the image has long attained totemic significance to locals. Alton boosters decided in 1920 to put the Piasa back on its perch. They commis-

sioned a painting to be made on a rock on the Great River Road outside town, based on an 1887 sketch drawn from written descriptions. It and several successors fell victim to road widenings, to weather—a limestone cliff face is not an ideal canvas—and, most recently, to the loss of a lease.

In 1997 there was no Piasa Bird watching over the Great River Road. Its wished-for return is complicated by a shortage of rentable space on the local bluffs, and by scenic protection rules that govern the placement of what is, whatever its other meanings, an advertisement.



(Elsah, says a local tourism brochure, has "few modern buildings to spoil the quaint atmosphere.") The whole village was successfully nominated for the National Register by savvy locals who realized as early as the 1960s that things that no longer could be built today would be irresistible products in the market of tomorrow.

Calhoun and Greene counties lack a fully developed modern

economic infrastructure in the form of airports, interstates, railroads, cities. However, these places do boast an unmatched natural infrastructure in the form of bluffs, forests, back-water lakes and other wetlands, views, and wildlife. What the mansions of Upper Alton were to Alton, the Dividing Ridge is to Calhoun County; what the stone warehouse is to Grafton, the forests are to Jersey

County—relics with new relevance. Rather than progress being measured by the rate at which the natural systems are changed, as was the case in 19th century Illinois, progress in the evolved natural resources economy is measured by success in keeping them unchanged, or—more usually the case in Illinois—in restoring them to their original function. 🌲

(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*; detailed regional assessments are being completed for resource-rich areas in which a public-private partnership is formed.

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

The *Big Rivers Area Assessment* and all other CTAP and Ecosystems Program documents are available from the IDNR Clearinghouse at (217)782-7498 or TDD (217)782-9175. Many are also available on the EcoForum Bulletin Board at (800)528-5486 or (217)782-8447. Documents also are 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 ecoprgr@dnrmail.state.il.us.

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