



WHAT NEEDS TO BE DONE

Bill Witt

Increase foliage

Instead of attempting to remove predators, increasing woody and herbaceous foliage seems to decrease the rate of predation. (Also see discussion on habitat quality, page 15.) Most forestry professionals recommend removing cattle and other grazing livestock from forests. Besides reducing understory cover, heavy grazing slows down or prevents tree regeneration and compacts the soil (Popotnik and Giuliano 2000). Removal of excess deer that over-browse the understory also helps foliage recover.

Promote reforestation

By promoting the *reforestation* or *reconstruction* of forest openings, you can create larger forest tracts. Planting native trees is a great way to close artificially created openings, such as old agricultural fields or heavily logged sites, in the woodland and encourage more Neotropical migrants to nest. When possible, work with neighboring landowners to create larger blocks of unbroken woodland.

Foresters offer many tips for starting and maintaining forest reconstruction. When restoring degraded forests, remove undesirable species, such as multiflora rose, when possible. Unwanted species can be removed by cutting or, where older fire-resistant trees exist, burning. If necessary, carefully selected herbicides can be used for the most aggressive plants.

During the early stages of forest reconstruction on cleared land, consider using annuals, especially annual grasses, as a nursery crop for seedling trees. The nursery annuals block the wind, which



You're not alone. Talking over your land protection goals, exploring financial incentive programs and creating a land management plan with experts are good steps to take toward the future.

can cause enough water to evaporate from the leaves that the young trees die (Schultz 2002).

Creating a mosaic, or patchwork, of early and mid-successional woodlands while protecting large tracts of mature forests will benefit many different species and ages of birds—from woodpeckers to warblers and from nestlings to adults.

Provide nest sites

Many forest birds excavate nest cavities in dead or dying trees—or use a cavity another species has created. If your forest management plan includes removing mature softwood trees such as silver maple, you can create natural cavities by girdling the trees. Softer wood trees die

fairly quickly and cavity species can begin to develop cavities within a few years of girdling (Schultz 2002).

Nest boxes for *cavity-nesting birds* are also beneficial. Many times in small woodland tracts, mature and standing dead trees are rare, and cavity-nesting birds lack suitable habitat for nest building. Providing boxes for these birds can attract them to the area and give the landowner a chance to see the feathered tenants once

Trying to remove all predators is futile and inappropriate. Improving the quality of the forest is more effective.

Common sense can help you determine how to manage for Neotropical migrants.

There is always more we can learn to help in land management decisions. Species have a wide variety of breeding habits and responses to fragmentation and land use. Some researchers believe that landowners and land managers need a wealth of information about bird and habitat relationships and the distribution of birds on the landscape before they make informed decisions.

Yet, several proactive steps can be taken to conserve species before more severe population declines are evident. It all boils down to this:

1. The larger the habitat area, the better.
2. The higher the habitat quality, the better. Strive for adequate and appropriate tree and plant species and structure.
3. Encourage native species of trees, shrubs, grasses and flowers.
4. Discourage non-native invasive species, such as tartarian honeysuckle and garlic mustard.
5. Preserve unbroken interior forests when possible.

Managing bluffland ecosystems

Forests

Current research suggests that much of the Midwestern United States represents a regional population *sink* for forest-nesting Neotrops. The birds may be present in a habitat because individuals of a particular species are immigrating into that habitat from another area. However, these species are probably not able to offset adult mortality with young, even in the largest forest fragments that remain in the area. The reason is probably due to the extremely high levels of predation

(Robinson 1992).

One way to increase the population size of Neotropical migrants in a given area is to decrease the rate of predation. This can be accomplished by physically removing some of the predators, such as the raccoon, domestic cat and crow, which destroy the nests and young of birds. However, it is futile to try to remove all of the predators. For each animal or species removed, another will likely take its place in the ecosystem. Furthermore, attempting to remove all the predators in an area will simply knock the biological system further out of balance. It is more effective in the long run to work with the physical structure and quality of the forest.

in a while. However, nest boxes should be monitored and cleaned out annually to prevent a build-up of nest materials and harmful insects.

Cliffs

Cliffs, especially those that occur along the Upper Mississippi River bluffs, offer unique nest sites, or eyries, for a species that was on the brink of extinction: the Peregrine Falcon. This raptor is considered one of the world's fastest birds, reaching 260 mph while diving after prey.

The Peregrine Falcon and other birds of prey, such as the Bald Eagle, almost disappeared from North America because of widespread use of the pesticide DDT. Although still seen along the Mississippi River Flyway during migration, nesting

Tom Con-



Sharp or “hard” edges between two very different habitats (as in the bottom example) attract many nest predators, such as the skunk and the Brown-headed Cowbird, a nest parasite that lays its eggs in nests of other birds. Creating soft edges by blending the two habitats more gradually (as in the top example) may decrease opportunities for predators and cowbirds while benefiting shrub-nesting species. Planting a buffer strip of shrubs or understory trees, or allowing natural revegetation on the edge area are ways to accomplish this.

state lists here in the Midwest, but thanks to the efforts of the Raptor Center at the University of Minnesota, the Minnesota and Iowa Departments of Natural Resources, organizations such as the Raptor Resource Project and others, the falcons are returning to a few of their historical eyries.

However, degradation of many cliff sites may be preventing the birds from re-establishing healthy breeding populations in the Midwest, including Iowa. The unchecked growth of trees and shrubs and the development of the bluffs are two of the major factors. Protecting these cliffs and removing unwanted vegetation from the rock outcroppings, especially those identified by the Raptor Resource Project

as historic eyries and potential nest sites, could lead to the thrill of discovering a returning pair of falcons on your property.

Riparian lands

Riparian areas are linear habitats adjacent to rivers or streams. These areas serve as transition zones between terrestrial and aquatic systems, often have more diverse vegetative structure and are home to more plants and animals than the adjacent uplands. They also filter nutrients and sediment and act as buffers from disturbance in upland areas.

Riparian systems are considered key elements of migratory bird habitat as they provide food, cover and water and serve as migration corridors and connectors

About 40% of the Upper Mississippi River floodplain forests have been destroyed since the late 1890s.

between habitats (Sedgwick and Knopf 1987).

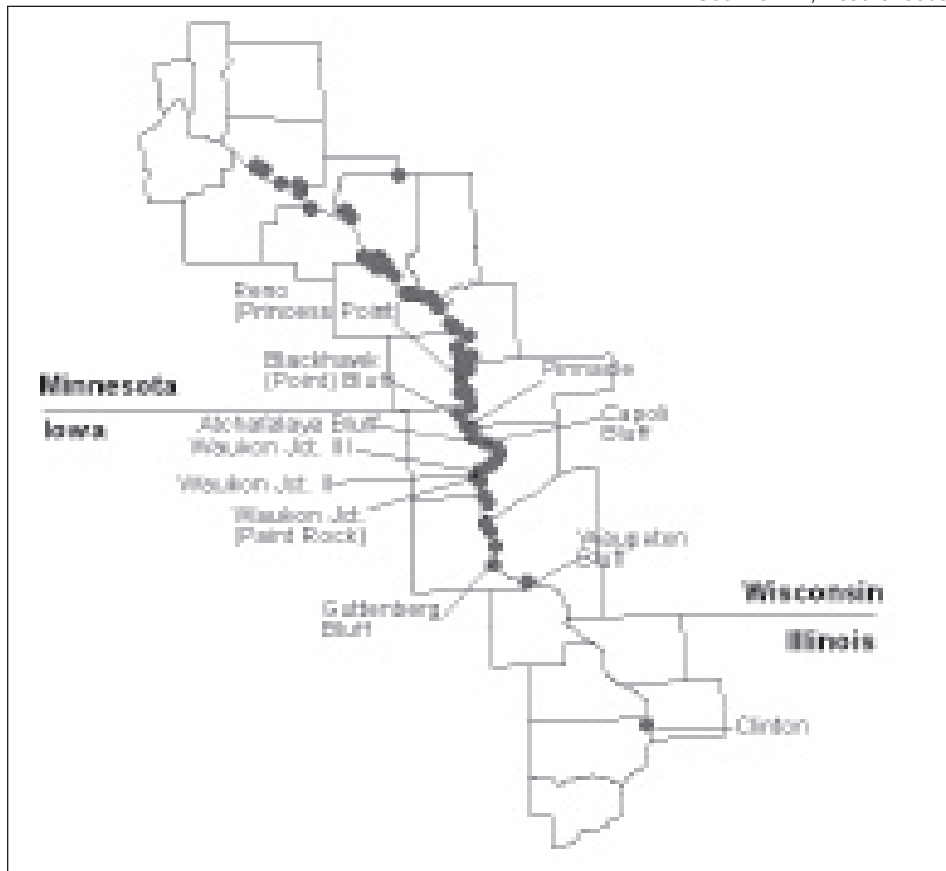
Unfortunately, the north-central United States has experienced more loss of floodplain forests than anywhere else in the nation. Conservative estimates from land cover map comparisons show that about 40% of the Upper Mississippi River floodplain forests have been destroyed since the late 1890s (Knutson and Klaas 1998). The forested area along the Mississippi River and some major tributaries contain the last major *refugia* in this region of the Midwest for many forest-interior species.

Researchers have identified 18 species of Neotrops sensitive to fragmentation that breed in the lowland forests of the Upper Mississippi River (though some may also breed in upland areas). These species include the Wood Thrush, Warbling Vireo, Yellow-throated Vireo, Northern Parula, American Redstart, Prothonotary Warbler, Yellow-throated Warbler, Cerulean Warbler, Acadian Flycatcher and Red-shouldered Hawk.

A riparian *corridor's* suitability as avian habitat varies depending on factors such as width, length, degree of fragmentation and dominant vegetation. To encourage a diverse avian community, riparian corridors should be as wide and long as possible. Managers should manage existing habitat or restore corridors and *buffer strips* that are at least 300 feet wide (Fischer 1999), with 600 feet and 2000 feet being preferred for small to medium rivers and larger rivers, respectively.

The corridor should also be relatively free from improved roads, human settlements and other impacts. If any grazing

INHF/Soo Wai-kin, Heather Jobst



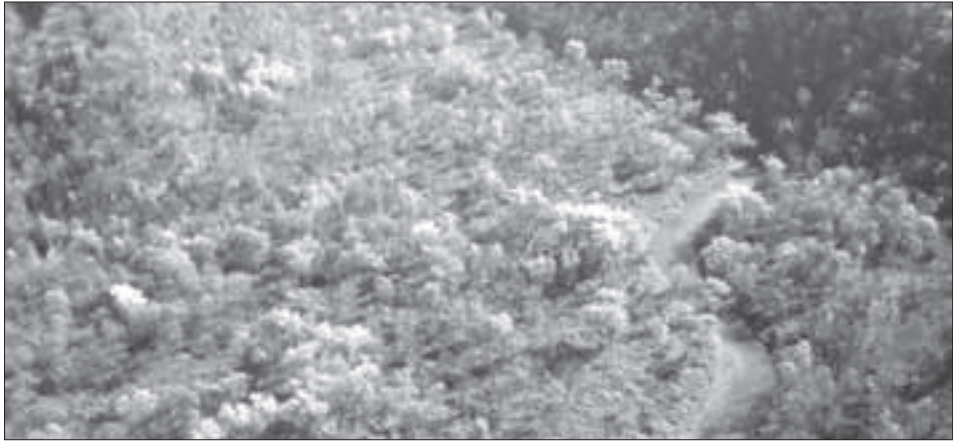
While Peregrine Falcons once faced extinction, they are making a slow comeback. In May 2000, the Raptor Resource Project (RRP) flew the upper Mississippi River and identified and evaluated nearly 90 historic (labeled above) or potential (unlabeled) nesting sites (eyries) on the river cliffs. Using RRP site coordinates, INHF created a map to help Blufflands Alliance partners identify eyrie sites for protection. Here is a simplified version of that map.

takes place, it should be seasonal, preferably in the fall and winter, and of short duration. Year-long or spring/summer grazing has the most negative impact on vegetation through constant trampling and grazing (Sedgwick and Knopf 1987).

Restoring riparian buffers, some as narrow as 40 feet, along even small streams has a dramatic effect on the birdlife. Iowa State University has found that, following restoration of a pasture to a riparian buffer ecosystem with trees, shrubs, native grasses and forbs, summer bird species present increased from eight to more than 40 in as little as seven to eight years (Schultz 2002). When linked to the forests of the larger rivers, these small buffers can become important wildlife corridors on the landscape.

Although normal flooding can be positive for some bird species, severe flooding has been found to reduce both the number of birds present in a floodplain and the number of different species. Many things can impact flooding, including the presence of dams and levees and channelization.

Land use within the *watershed* of a river or stream also impacts flooding (Knutson and Klaas 1997). When rain falls on an upland area or slope, some of the water soaks into the ground and some flows overland into the river, carrying with



Note how the Yellow River passes through the center of this photo and creates riparian habitat. This landscape-perspective project was created when the Iowa Natural Heritage Foundation, working with a willing private seller, added 1,045 acres to Effigy Mounds National Monument (EFMO). See

it soil and other substances. In areas that don't have enough vegetation to capture the rainfall and slow it down, such as a plowed field or over-grazed pasture, severe flooding can occur more often.

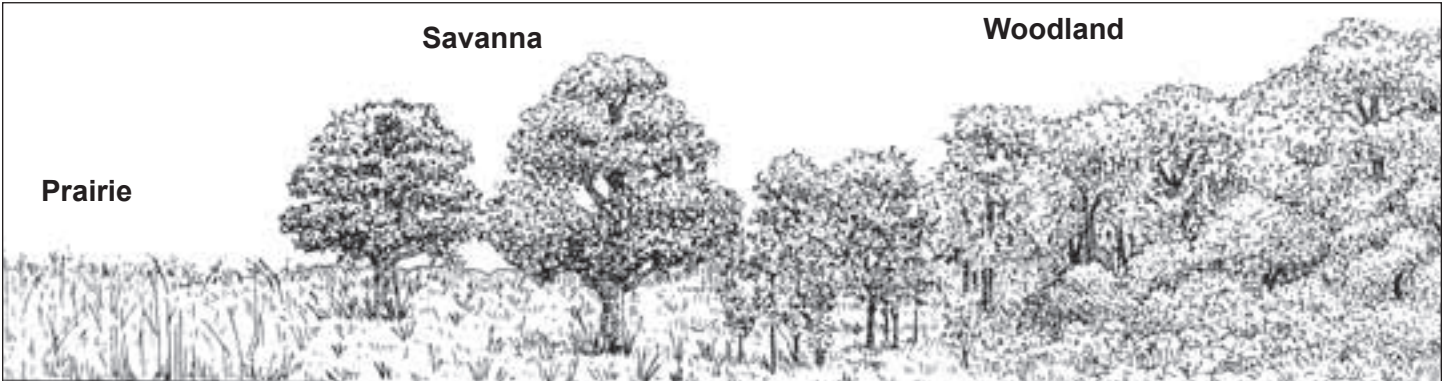
Good watershed practices and a healthy riparian area will minimize adverse impacts to Neotrops and water quality.

Savannas

Although the experts don't always agree on the definition of savanna, and even the spelling of the word (savannah), they *do* agree that savannas are one of the most endangered ecosystems in the world. Oak savanna probably once

covered some 27-32 million acres in the Midwest, but a 1995 survey found only about 0.02% of the original savannas still in relatively good condition (Nuzzo 1994). The Midwest's savannas have been cleared, over-grazed or choked by too many encroaching plants and trees from lack of native grazing herbivores and the fire that created and maintained them for hundreds of years.

Considered the transition zone between prairies of the west and forests of the east, Midwestern oak savannas provide habitat for birds such as the Savanna Sparrow, Eastern Bluebird and Loggerhead Shrike. Birds like these fill the grass and shrub



The oak savanna, with its characteristic open-grown oaks, is one of the Midwest's most threatened ecosystems. Considered a transition zone between forest and prairie, a savanna contains some plant and animal species from

each of these two communities, and some of its own. The Loggerhead Shrike, Bewick's Wren and Swainson's Hawk are three savanna species with declining populations.

seeds and insects, while forest birds such as Indigo Buntings, White-breasted Nuthatches and Least Flycatchers glean insects from the trees.

Savannas, with their characteristic scattered trees, can have a *canopy* that ranges from nearly closed to as open as 10% (but usually less than 50%) with a ground cover that is diverse and reflects the subtle changes in the soil conditions within each site. This ground cover, or herbaceous layer, dominates the savanna. Here in the black soil of the Midwest, 80- to-250 year-old fire-tolerant bur oaks, with their thick bark and deep roots, are the predominant trees in savanna ecosystems, although white and even swamp oaks are present in some situations.

In the few remnants of savanna that remain in the Midwest, oaks are aging and dying. The oak seedling regeneration is almost non-existent as the invading successional trees and exotic shrubs, such as sumac, buckthorn, honeysuckle and multiflora rose, create shade too dense for oak regeneration (Apfelbaum 1990). With the invasive species no longer held in check by fire and roaming elk and bison, the unique plant, insect, animal and bird communities within the savannas are struggling to maintain a toehold.

Oak savanna restoration can increase bird diversity. Restored savanna environments can provide new habitat for many

declining bird species, such as the Red-headed Woodpecker, Eastern Kingbird, Brown Thrasher, Baltimore Oriole and American Goldfinch—Iowa's state bird (Davis et al. 2000).

To restore a savanna, remove unwanted woody vegetation from around the oak

In the absence of fire and roaming elk and bison, the unique plant, insect, animal and bird communities within the savannas are struggling to maintain a toehold.

trees. If too few oaks are present, savanna grasses, such as Big Bluestem and Indian Grass, can be planted to help carry fire and prevent re-invasion of other species. Just be sure to plant grasses and trees of various heights as some birds prefer short vegetation while others use tall vegetation at the start of the breeding season.

When used judiciously, grazing can be used as a savanna management tool. For best management practices, divide the grazing area into sections, with each section receiving a different level of grazing pressure. These areas should be rotated on an annual basis. Some land managers in southwest Wisconsin are using Scottish Highland cattle in a rotational

Bill Witt

grazing system. This hardy breed is able to browse and remove undesirable species such as prickly ash, multiflora rose and box elder (University of Wisconsin Extension 2001).

Mowing can control vegetation for these birds. However, timing is important: avoid mowing before late July or early August as many birds are nesting and breeding during this time, and avoid mowing the savanna too late in the growing season because this can affect regrowth and can also encourage invasion of problem species.

Another management regime for savannas involves using prescribed fire annually or at least every two to three years, with hotter fires on drier sites, until the most recently established invading species are eliminated (Packard and Mutel 1997).

As with woodland birds, minimizing *sharp*, or hard, *edges* is key in maintaining savanna species. Blending prairie into savanna and savanna into forest, rather than having rowcrop as an edge, is best. Another advantage to having a prairie or forest area as the edge is that these two communities share many plant species with the savanna, so plants and animals can migrate back and forth between prairie and savanna or savanna and forest. As noted earlier, maintaining square or round parcels is much better at minimizing edge than are skinny, rectangular-shaped areas.

Prairies

A prairie is a community of grasses, forbs (wildflowers), some shrubs, animals and microorganisms. Within the tallgrass prairie here in Iowa, there are three basic types of prairie – dry, *mesic* and wet. Prairie plants are renowned for their capacity to hold—and create—soil and to absorb a lot of rainfall in a short amount of time.

As mentioned before, most of the

(continued on page 23)

Many Iowa prairies grow near woodlands and can provide a host of insects, seeds and nesting



Some hillside prairies were given the name “goat prairie” because they were “too steep to mow and only fit for a goat.”

prairie in northeastern Iowa was located on the dry ridgetops and steep west-facing slopes. These openings, known as goat prairies, often varied in size from small patches to several acres. That is where remnants, often overgrown with young trees such as cedars, are still found.

Anyone can learn to recognize a prairie. If there is a remnant present, you will probably be able to find at least some native warm-season grasses, like big bluestem, little bluestem or Indian grass. These are easier to recognize in the late summer or fall as the wine-colored stems and leaves stand out from the drab tan color of the cool-season grasses like brome.

Forbs, which you will find blooming at different times throughout the growing season, can be as colorful as the brightest Neotropical migrants. Your site might include species such as prairie violet, round-headed bush clover, leadplant or wild rose. If the land has been heavily grazed, however, the more easily identified plants might be present more as roots, or even seed within the soil, waiting for better times.

To restore these remnants to health, remove encroaching trees. Consider controlled burns to invigorate prairie plants to grow and produce seed. Research is currently underway to explore rotational grazing regimes that perhaps can be applied in unison with fire.

If seeding is needed, purchase *local ecotype* seed, which has co-evolved with the local climate, insects and animals (M. Ehresman and Kurtz 2000). Although prairie seed can be expensive (shop around!),



Prescribed, or planned, burning can be a good land management tool—often removing undesirable species—if handled with care.

use enough seed of both grasses and forbs at the beginning of your restoration or reconstruction. Planting only the more common or more easily grown grasses can cause you management problems later on as they will have gotten a strong-hold on the site, preventing later additions from successfully being added.

Farmsteads

Rather than mowing acres of bluegrass, many farmers are now planting native species around their farmsteads—less work

and more habitat.

If you must mow bluegrass or other plantings, try postponing it until mid-July to give some of the bird species a chance to raise a brood.

Consider leaving large trees if there are some in the yard, and planting the ground layer to native savanna species. If there are no trees, consider planting prairie species, if that is what existed there historically. Otherwise, plant native trees.

If you want to do even more “for the birds” on your farmstead, consider the following:

- protect remaining woodland, savanna and prairie;
- use nature-friendly development if you must construct more buildings (keep your buildings clustered and near the road, rather than spread out);
- leave dead and dying trees (top them if you must, but leave trunks);
- provide clean water and brush piles;
- limit your use of pesticides; and
- keep your cats indoors or in an enclosed pen.

In one study, Iowa State University researchers found that when a pasture was restored to an ecosystem with trees, shrubs, native grasses and forbs, summer bird species increased from eight to more than 40 in as little as seven to eight years.

Selected management issues

Management of our mixed hardwood forests and oak woodlands is a long-term commitment, and regeneration of oaks and other hardwood trees should be the long-term goal. Unfortunately, this resource has been declining due to increased cutting and poor, or nonexistent, management (University of Minnesota Extension 1992). Just as allowing cattle to graze in our forests is now considered poor management, other management issues are equally important: unethical/unwise logging; local over-population of deer; and invasive non-native plant species.

Logging practices

The forestry profession is no longer just about growing trees and cutting them down, just as wildlife management is no longer just about maintaining populations of game animals and shooting them. If you want a truly sustainable, large and valuable timber

inventory, consider the balance of nature, healthy soils, mixed composition stands, and uneven-age structure when designing a management plan for your forest. Well-managed forests play critical roles in watershed protection and soil health while providing habitat for many game and nongame animals. Such a forest also stands a better chance of sustaining your own family, as well as Neotropical migrants, far into the future.

When looking at the Upper Mississippi River bluffland area from a landscape perspective, any logging should be done judiciously.

Studies show that the degree of change in vegetation structure brought about by timber harvest typically determines the degree of change in the bird community. Although some avian biologists often recommend single-tree selection as the best harvest practice for maintaining bird communities (Herkert et al. 1993), partial or selective harvests may produce only small changes in the bird community and continue to provide habitat for those species found in mature stands (Medin and Booth 1989).

Implementing only one type of regenera-

When timber is harvested, the degree of change in vegetation structure typically determines the degree of change in the bird community.

tion practice can cause adverse effects. For example, single-tree selection can cause removal of the largest canopy trees in an area, reducing the diversity and density of potential nest sites for canopy nesters. Besides this, consider that you need mature trees to produce the seed, then seedlings and saplings to become mature trees.

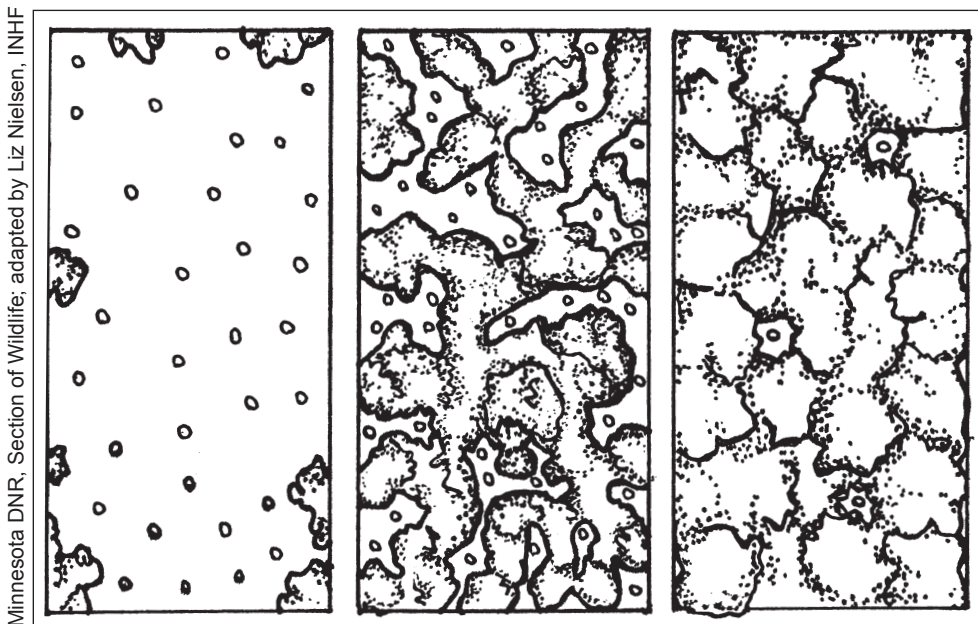
However, removing groups of trees or whole stands results in the replacement of late-successional forest bird species with early successional forest species and species associated with edges. Avian species of special concern can certainly include those birds that require early- or late-successional forests, but with the few acres of mature timber Iowa has remaining, forest management practices should be evaluated in landscape and regional contexts.

Again, working with a team of professionals, including wildlife biologists and foresters, and hiring an ethical logger will help ensure the desired result.

Deer

Both white-tailed deer and elk once roamed Iowa, including northeast Iowa. Elk disappeared in the 1840s, and unregulated hunting also led to the near-disappearance of deer in the 1920s. Deer made a come-back in the 1940s, much to the delight of most Iowans. Today, white-tails have possibly become too much of a good thing.

Large populations of deer that browse on seedlings and saplings and spread invasive plant seeds can wreak havoc on wooded areas, thereby affecting birds using the same habitat (DeCalesta



A bird's eye view of different harvest methods: *clearcutting* (left) favors shade-intolerant trees such as cottonwood and birch. *Shelterwood cuts* (middle) favor intermediate trees species such as white oak and hickory. *Single-tree or selective harvest* (right) favors shade-tolerant trees, such as basswood or maples. Each harvest practice also favors particular bird species.

1994).

In central Iowa's Polk County, a report on the impacts of deer browsing in woodland shows several patterns involving woody growth and flowering plants. Perhaps the most significant finding concerning birds is that after two full growing seasons at three study sites, native woody shrubs (20 inches to 6-1/2 feet tall) were 2-1/2 times more dense in a fenced enclosure (a structure that keeps out deer) than in the browsed plots. This is significant because structure is very important to birds as they seek shelter and nesting areas (Rosburg 2002).

Currently, other research is underway to determine whether an overpopulation of deer may browse the understory to the point that there is less regeneration of trees than needed to maintain a healthy and diverse forest (DeGraaf and Rappole 1995). Without large predators to keep deer populations in check, hunting is a viable alternative that can be considered part of a management plan.

Carl Kurtz



Deer love to eat your garden and jeweled shooting star, an Iowa-threatened plant species.



After habitat loss, the rampant spread of invasive plant species may be the second most important problem facing landowners and resource managers. Here, invasive garlic mustard blankets the forest floor, crowding out most of the native plants that will otherwise provide a source of food and insects for Neotrops.

Invasive/non-native plant species

After habitat loss, the issue of invasive species is now considered to be the second most important problem facing natural resource managers as they struggle to maintain bits and pieces of our planet's natural communities (Dinsmore and Bernstein 2001).

Garden stores and catalogues promote many non-native plants, shrubs and trees as "great for birds," but we have no way of knowing which of these species will become problems in our natural communities or our agricultural systems. Already, plants like leafy spurge, purple loosestrife, tartarian honeysuckle, buckthorn and garlic mustard are posing large problems in our grasslands and forests. Insects that damage crops and trees, like the European corn borer and gypsy moth, came into the country attached to plants or embedded in the soil around the roots.

The United States spends an estimated

\$100 billion annually on invasive species (Pimental et al. 1999). While chemicals are a traditional treatment, researchers are having success eliminating some invasive species with fire management. Be aware of this problem, ask questions of knowledgeable people and be sure to plant only those species that are native to your area or region.

Partnering to manage larger landscapes

Whether it's two neighbors unofficially coordinating management plans or large partnerships between private landowners, public agencies and nonprofit organizations, some management goals are best approached on a landscape level rather than as only a single property.

Taking a landscape perspective

Armed with evidence provided by researchers, management biologists have begun looking at the overall assortment of land types: the *landscape perspective*. For example, in northeastern Iowa we see forest, degraded savanna and prairie, wetland, riparian or river bottomland, agriculture and urban land compacted into relatively small areas.

Land managers using this perspective create management plans by considering not only the forest or savanna, but also the types of land use *around* these habitats (such as pastures and row crop) and other land types *within* them (such as goat prairies or wetlands).

While state wildlife biologists may be busy managing wildlife areas and

forests for wildlife species and other resource objectives, the adjacent private landowners can help carry out plans for landscape-level management.

Forestry commissions from Australia to Great Britain to Canada are introducing the concept of *connectivity* and are enlisting the help of area landowners as parcels of land are connected by similar management goals. Just as landowners and agency staff have created partnerships to benefit wetland species, similar collaboration in managing forests and other habitats would increase biological diversity of a larger area. More species will benefit by this type of management.

Landowner assistance

Many private and government programs provide assistance to landowners interested in protecting and managing their property's natural resources. Check the appendix for a partial list of such programs.

For example, nonprofit groups like the Iowa Natural Heritage Foundation (INHF) can hold conservation easements, an arrangement where private landowners agree to maintain private ownership and use while giving up selected rights, such as development or mining. Depending on the circumstances, landowner compensation varies from personal satisfaction to significant tax benefits to full reimbursement for appraised value of the rights contained in the easement.

INHF and similar organizations can also help landowners undertake management activities on selected protected properties.

It will take everyone working together to create complexes of habitats large enough to really have a positive impact on local Neotropical migrant populations.

Development and zoning

Due to the beauty and unique qualities of the blufflands, the region is facing tremendous development and resource use pressure. Just like the Neotropical

migrants, people need and want nice places to live.

However, care must be taken to prevent negative impacts to the very same biological systems that support us all. Communities, including citizens and zoning officials, must resist the temptation of short-term windfalls at the expense of long-term environmental and economic health.

What was once a deep, healthy and scenic forest or a lovely, park-like savanna can quickly become degraded by all the elements that are part of development: soil compaction or erosion, fertilizer, pesticide or noise pollution and water runoff instead

Depending on the circumstances, landowner compensation varies from personal satisfaction to significant tax benefits to full reimbursement for appraised value of the rights contained in the easement.

of groundwater recharge. Consider, also, the obstacles to wildlife posed by the buildings, roads and utility corridors of "citized" landscaping.

Citizens and civic leaders alike must seek development that is compatible and sustainable. Any type of development, whether a large-scale or small acreage or even a public trail, should be designed to reduce negative impacts on the site and maintain as much biological integrity as possible. Unique habitats or the larger intact areas simply should not be developed but should be left for the enjoyment of all.

Zoning officials and policy-makers at the city and county levels would do well by

PROTECTING YOUR

☒ GOOD WORK

You've made the choice. You are either going to expand or improve the natural area you have remaining, or just leave it alone. Now you have another decision: Are you going to protect your land beyond your lifetime and for future generations? How are you going to accomplish this?

The Iowa Natural Heritage Foundation has produced a free booklet, *The Landowners Options: A guide to the voluntary protection of land in Iowa*. It is available through INHF and other conservation offices or online at www.inhf.org.

The booklet describes 18 legal methods of permanently protecting property in Iowa, like those described in "Success Stories" on page 27. One of the options, or a combination of options, can probably be matched to your needs and desires. The Foundation has knowledgeable staff who will listen to your wishes and work with you for the benefit of you and your land.

their communities to explore conservation planning, which makes development more compatible with nature. According to an award-winning architect and planning firm, “Many real estate developers are learning that good conservation design can get government approval more easily, and can be lower in cost than conventional development. They are also finding that people in all price ranges want more community, less traffic, and love nature” (Village Habitat Design).

As an added incentive, communities that create master plans which concentrate housing and other development near existing services can better control costly tax increases. Allowing development to sprawl into outlying open spaces is costly because electricity, water, sewer and other services will need to be extended into these areas. Keeping development localized and protecting open spaces saves taxpayers money—and protects their natural resources.

Finding partners

As a landowner or land manager, you are not expected to work in a vacuum. County, state and federal agencies, academic institutions and many nonprofit organizations throughout the Midwest have developed resources in the form of programs, publications or staffing to help. Yet many of these support programs face political and financial hurdles.

As a member of your human and ecological community, participate in the creation and support of wise land use plans in your county. Write to public agencies and legislators and let them know you care and understand the economic and ecological value of Neotropical migrants.

It will take all of us working cooperatively to ensure that Iowa’s landscape contains all the elements of healthy ecosystems.

Bill Witt

INHF/John Ledges



Dick Worm, a Mississippi River bluffs landowner, gazes over the land he and his family protected with a conservation easement through the Iowa Natural Heritage Foundation. Dick and family met several times with INHF staff (above) to develop a mutually satisfying protection plan.

SUCCESS STORIES

Many landowners want to ensure their good stewardship choices will continue beyond their lifetime. Such options include bequests, donations with reserved life estate, bargain sales, conservation easements and more.

In 1996, after working 21 years to purchase and restore their natural retreat, Jane and Richard Worm donated a conservation easement on their 145-acre property, Faraway Farm, to the the Iowa Natural Heritage Foundation (INHF). While the Worms continue to own and enjoy the beautiful woodland overlooking the Mississippi River, their easement prevents them and future owners from developing the property and damaging its natural features.

In 1999, landowner Charles Kistler decided that, rather than subdividing his 1,045 acres of Mississippi River bluffs timber, he’d sell the entire parcel to INHF. This special property contains 13 archeological sites, including two ancient effigy mounds. It also contains rare and endangered plant and animal species—such as a nesting pair of Red-shouldered Hawks (an Iowa threatened species and Neotropical migrant).

INHF raised acquisition funds from

the National Park Service (NPS), two Iowa agencies and more than 1,000 private donors. The site is now owned by NPS and is known as the Heritage Addition to Effigy Mounds National Monument (EFMO). By connecting EFMO and a unit of the Yellow River State Forest, this addition put more than 4,000 contiguous acres and 7.8 miles of the scenic Yellow River under public protection. (See photo on page 21.)

In 2004, Raleigh and JoEllyn Buckmaster donated a conservation easement to INHF on the most sensitive parts of their property. Located near Lansing, Iowa, the 170-acre easement area contains more than two miles of bluffline overlooking the Mississippi River. It’s highlighted by Capoli, a rugged bluff that once held a Peregrine Falcon eyrie (nest site).

The Buckmaster family has spent decades carefully tending and restoring their land’s many natural and archeological resources. For example, they are clearing the face of the bluff of invading trees in hopes that Peregrines once again make the bluff their home.