

Part II: Recommendations for Conserving Biodiversity

The Biology Committee hopes the Biodiversity Plan will highlight ways to conserve and restore native biodiversity and encourage an adequate distribution of healthy biological communities in each ecoregion. Their recommendations point out actions needed to conserve Oklahoma's biodiversity, as well as general suggestions for implementation. The other committees, as represented in the chapters that follow, identified specific actions that agencies, businesses and landowners can implement to meet these needs within their areas of expertise and responsibilities. Refer to the list of Task Force members on pages *xiii* through *xv* for committee memberships.



Chapter 5: Biological Recommendations To Conserve Oklahoma's Biodiversity

Societal or Economic Level

Clean Air, Water and Soil Practices

The major impacts on biodiversity are directly related to human activities. For biodiversity to persist, healthy ecosystems must be maintained. Therefore, part of biodiversity conservation involves stabilizing, reducing or reversing the impacts our activities have on the three major environmental components: air, water and soil. The Biology Committee recommends five goals or actions that can be incorporated into the conservation of these three components.

Use native communities in conservation efforts. Exotic species have been used extensively in protecting soil and water. All too often exotic species have made the transition from being the ideal solution to a problem to becoming major pests. In most cases,

species native to the area could be used to perform the same function without the risk of becoming pests. Examples of intentional and accidental introductions include such things as kudzu, Japanese honeysuckle, musk thistle, sericea lespedeza, Old World bluestem, zebra mussels and fire ants.

Efforts to conserve soil and water, as well as maintain air and water quality, should be directed to use diverse natural communities to achieve these goals rather than attempting to use exotic species or monocultures of native species. Diverse communities often function better than monocultures and improve biodiversity.

Minimize pesticide and fertilizer use. Since the 1960s, we have become increasingly aware of the many potential problems associated with the application of chemicals to ecosystems. The loss of nontarget species (those not intended to be affected), effects on

human health and **eutrophication** (high nutrient levels with seasonal oxygen deficiencies) of aquatic systems are conspicuous complications resulting from chemical misuse. Alternatives to using chemicals are frequently available and their development and use should be encouraged.

Support use of wetlands for water management. In the past, wetlands have been treated as wastelands. Their importance as habitat for unique organisms and their role in ground, surface and atmospheric water regimes were not acknowledged. Now that we understand their importance, wetland maintenance and restoration should be a high priority. Uses of wetlands to perform various functions, including wastewater treatment and flood control, are becoming more widespread. These uses should be encouraged in Oklahoma.

Maintain integrity of river and stream flow. Many plants and animals are adapted to specific aquatic environments (with certain temperature, flow velocity, turbulence, substrate, seasonal fluctuations, turbidity and other requirements). When natural processes are altered, organisms inhabiting that system will be affected. Dams, irrigation withdrawals, water transfer, overgrazing, erosion, removal of riparian vegetation, road building and other practices have drastically altered flow regimes and sedimentation in many of our aquatic systems, resulting in the reduction or complete loss of many species or natural communities.

For example, livestock overgrazing can have far-reaching effects. Overgrazing reduces vegetative ground cover, increasing the amount of runoff. The increased runoff allows less water to infiltrate the soil to recharge groundwater and causes more surface erosion. Runoff also increases flash flooding in streams and drainages and causes siltation of the stream or, in extreme cases, scouring (flushing away sediments down to bedrock). Either result alters the substrate available for organisms in the stream. Seasonal extremes in flow are greatly exaggerated in that floods are higher than normal and low flows are lower than normal. The results can be devastating both to organisms originally adapted to that stream as well as to farming and other downstream land uses.

"Normal" in-stream flow regimes should be determined and efforts made to maintain normal flows through proper land use, managed discharges of water

from dams, groundwater management and use of other sustainable management practices.

Encourage incentives for proper practices in air, water and land management. It is not enough simply to state that these are things we need to do. We should provide incentives to encourage individuals, landowners and businesses to practice conservation of air, water and land resources rather than continue practices that degrade the environment and biodiversity. Implementation of such incentives will require the cooperation and coordination of: individuals; private organizations; local, municipal, county, state and federal agencies and governments; businesses and industries.

Environmental Education

Education will play an important role in maintaining Oklahoma's biodiversity. Without a strong commitment to educate Oklahomans, any efforts related to the preservation and restoration of the state's biodiversity will be handicapped. Educators should emphasize making projects fit into natural landscapes rather than altering the landscape and natural communities to fit the project. Educational philosophies should address the underlying causes of decline and the merits of maintaining biodiversity rather than just symptomatic treatment of biodiversity declines. For example, educators should stress that destruction of snags has caused declines of various cavity nesting birds and bats, rather than simply encouraging the use of bird and bat houses without explaining why they are needed. Erecting bird and bat houses is treating a symptom caused by the loss of snags. Although these programs are important in biodiversity education, it is of utmost importance that the causes of the decline of biodiversity be stressed; examples are loss of snags, disturbance of caves, drainage of wetlands, and destruction of natural communities. Because of its central importance, biodiversity education programs should include the community or ecosystem concept, with descriptions of natural communities, their locations and how they may be valued.

The methods available for biodiversity education are as diverse as the concept itself. Many government and private education programs already exist through which a biodiversity education plan could effectively

be implemented. Different programs stress different areas and collectively cover a variety of topics related to biodiversity. Presently, no state agency is responsible for coordinating information related to biodiversity that is available from governmental agencies, business enterprises, educational entities, and volunteer organizations.

In addition, a need exists for an agency that could compile biodiversity information from various organizations under one “roof.” This agency could serve as a clearinghouse or information source that would more effectively advertise, circulate and utilize educational materials from a variety of organizations. This entity also could serve as a link to bring together businesses, higher education, public schools, volunteer organizations and others into alliances through which biodiversity concepts could be shared and research activities could be coordinated.

Oklahoma’s state science curriculum should place greater emphasis on the concept of biodiversity. This might necessitate an approach from a variety of levels within the state. The educational governance structure in Oklahoma is many-tiered from the state legislature to local school boards, superintendents and teachers. Decision makers at all of these levels will have to be convinced of the importance of including biodiversity in the science education curriculum. Professional education organizations (e.g., the National Science Teachers Association and others) have a significant impact on educational programs and should be consulted as a biodiversity curriculum is designed.

A grassroots approach would be effective in Oklahoma. The primary and secondary science curricula should incorporate biodiversity concepts presented earlier. Sowing and cultivating the idea of biodiversity in these formative years will ensure that future generations are knowledgeable about basic biodiversity concepts.

In a time when molecular biology is in vogue and at the forefront of many university programs, it is important to realize that skills taught in traditional natural history, taxonomy and ecology courses are reemerging as the foundation courses for biodiversity programs. Of central importance to any biodiversity program is the database of what species exist or existed in a particular community. Taxonomists, ecologists and researchers trained in various natural

history, taxonomy and ecology areas provide these data. It is imperative that training of individuals in these disciplines continue to be supported in order to ensure that these skills exist in the future. However, the importance of molecular biology should not be downplayed because it also directly impacts biodiversity. Maintaining genetic diversity is a vital aspect of any biodiversity program. Estimation of the amount of genetic diversity within and among populations is possible because of molecular biology and its techniques. In a similar fashion, conservation-biology programs that teach unifying themes and integrate many of the principles taught in other disciplines should be developed or continue to be supported at the university level.

Accompanying the added emphasis that biodiversity should be accorded in the state’s higher education programs is the need for additional pure and applied biodiversity research opportunities. Potential grant resources both within Oklahoma and at the national level need to be identified and new ones developed to support research that improves our understanding of biodiversity.

Enlightening the general public about the importance of biodiversity should extend beyond the traditional educational systems of the state. A greater appreciation of biodiversity can be fostered by bringing people into close contact with nature. Oklahoma State Parks, nature programs and centers need to include biodiversity programs. Increased funding would allow interpretive centers to be improved and additional resource personnel to be employed.

Clearly, maintenance and restoration of Oklahoma’s biodiversity will require a diverse educational effort. This effort should be carefully designed and periodically reassessed, with input from many agencies, organizations and the public.

Local Government Conservation Efforts

Municipal and local governments should take actions to conserve and possibly increase biodiversity in Oklahoma. Development of rural land continues, especially to meet housing needs near metropolitan areas. Local municipalities should consider establishing greenbelts, parks, corridors, and other natural areas within their communities. Not only

would these actions conserve biodiversity, but they also would provide recreational opportunities and retard runoff following heavy rainfall. Using native plants and restricting exotic species whenever possible would enhance these natural areas and promote local biodiversity. It is important for local municipal officials to keep these considerations in mind as they formulate plans for future growth and development of their communities.

Throughout the state, illegal dumping of solid wastes creates an unsightly distraction and damages the habitat of many species. This problem will increase as landfills become full in the future. Therefore, regulatory or other actions may need to be increased to reduce dumping in inappropriate locations.

State and Federal Conservation Programs

Historically, federal and state expenditures on agricultural programs emphasized control of soil erosion and increased commodity production. Little effort was made to conserve native plant communities or wildlife. Introduced forages and trees were emphasized rather than restoring native prairies, shrublands and forests. Even under the Conservation Reserve Program (CRP), less than 30% of the CRP acreage in Oklahoma was replanted to native vegetation. Although CRP succeeded in reducing soil erosion, increased benefits could have been realized if more landowners would have used native species in their plantings—mixtures of native grasses, wildflowers, shrubs and trees—depending upon the region of the state. In addition, many introduced plants (e.g., musk thistle, old world bluestem, sericea lespedeza, tall fescue, annual bromes, multiflora rose, etc.) have become serious weed problems and have negatively impacted agricultural production and native biodiversity on surrounding lands.

All cost-share programs should reflect natural communities, ecosystem health and agricultural production. Introduced plants for livestock grazing have been over-promoted to the detriment of livestock and recreational enterprises (e.g., lease hunting). Plants native to a site should be emphasized when cropland is taken out of production. Noxious weed laws should be expanded to include all non-native species that escape from where they are planted.

Plants should not be introduced until they are fully screened for their “weediness” and ability to escape from cultivation.

Conservation on Private Land

Because more than 95 percent of Oklahoma is privately owned, the future of Oklahoma's biodiversity lies primarily in the management practices implemented on private lands. The high levels of biodiversity present on these lands speaks strongly about the conservation ethic many landowners already have. It is vital that the Biodiversity Project recognize the contributions and importance of private lands to Oklahoma's biodiversity and work with landowners to voluntarily incorporate biodiversity conservation with other activities occurring on the land.

Owners of large parcels of land can enhance biodiversity in their region by managing or restoring natural communities wherever possible on their property. Using diverse communities to achieve the same goals in which monocultures currently are used can be a significant help for biodiversity. For example, the use of native prairies in grazing pastures provides more value for biodiversity than monocultures of Bermuda grass or fescue. Not only do diverse communities provide benefits for biodiversity, but they often produce better forage, maintain higher productivity during droughts and provide other economic benefits for the landowner.

A variety of management practices associated with good stewardship benefit biodiversity. Careful or minimal use of chemicals (pesticides and fertilizers) reduces the likelihood that they will enter aquatic communities where they can have serious impacts. Using chemicals only when necessary also allows the landowner to benefit from the functions of many beneficial organisms, such as predatory insects and birds and soil organisms that make nutrients available to plants.

Reduced water usage allows greater amounts of water to be available for aquatic communities. Practices reducing water demand, such as using native species that require less irrigation (e.g., buffalo grass vs. Bermuda grass in lawns), help conserve important water supplies and reduce input costs to the landowner. Natural communities protect water bodies by reducing erosion and provide habitat for native

animals.

Urban lands. In urban areas, use of native species and communities in the landscape design will attract a high number of wildlife species, increasing the area's biodiversity over the handful of species typically found. These species provide enjoyment for the owners and often reduce pest populations. Because native plants are adapted to local environments and have defenses against pests, they reduce the amount of water and chemicals needed to maintain the yard and also maintain the uniqueness of each area of the state.

Urban or residential landowners can improve biodiversity by the development of "naturalistic landscapes" using native plants. These use a diversity of native plants suitable for the location and provide food and cover for wildlife. A diversity of native plants will encourage a diversity of insects, fruits and flowers that will attract a wide variety of birds, butterflies and other wildlife. A diversity of plants also decreases the probability of a pest outbreak that might require chemical control. Increase cover, shelter, nesting or reproductive areas, food and water to improve diversity.

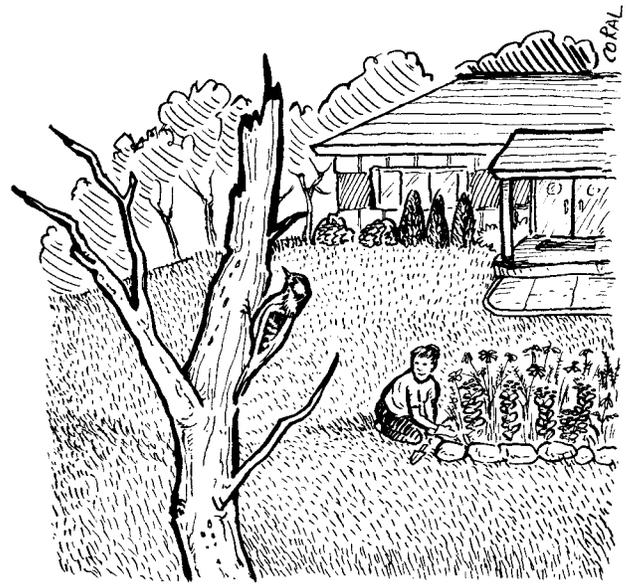
Selection of native plants of different heights and growth forms will increase the vertical structure and use by wildlife. For example, tall trees with short trees, shrubs, wildflowers and ground cover create continuous layers of foliage. Diversity can be increased by layering plants and by planting vegetation with varying shapes and foliage texture.

Another way to attract additional species to backyards is to group native plants in natural-looking patterns. Using plants that flower and produce seed or fruit at different times will ensure a long period of use by wildlife. Selecting native species with long flowering time will supply an abundance of fruits, nectar and seeds for several species. Shrubs can be used as borders to mark property lines and "out-of-the-way corner" areas can be used to plant thickets of tangled vines and shrubs.

Yards supporting only a handful of species (e.g., American robins, house sparrows and European starlings) may be transformed into "naturalistic landscapes" by development of curved borders and gardens of native wildflowers, shrubs, trees and ground cover. Allowing native honeysuckles,

blackberry, roses and sand plums to grow into overgrown thickets in "wild corners" also will provide valuable food and cover. Tree stumps may be used to support native vines to increase the diversity of the area.

Frogs, toads, salamanders, dragonflies and birds may be attracted by small ponds, pools or puddle areas



Prairie gardens and snags attract wildlife that can provide enjoyment for the owner.

in the yard. For greatest value, these should have some shallow areas to allow wetland plants to grow. For amphibians, the pool should be free of fish to allow tadpoles to survive to develop into frogs and salamanders. Small fish, such as mosquito fish, should be used for mosquito control to avoid predation on tadpoles.

Special features of the area may be used in the landscaping. Use a depression to construct small wetlands. Study localized variations in temperature and moisture conditions in different parts of the yard and use plants suited for these conditions. Hills have better drainage and should be used for plants that require less water. Other yard features that could improve diversity include soil differences, shade patterns and wind protection. Rock outcrops or sandy areas with little vegetation can serve as important sunning areas for lizards and butterflies.

Information on landscaping for wildlife and using native plants is available from many nurseries, private gardens, nature parks, the Oklahoma Department of Wildlife Conservation, the Oklahoma Native Plant Society, The Nature Conservancy, extension agents and state foresters. Visit an area where native plants can be observed to learn the growth form and requirements of the species. Select species with the desired characteristics for use in the landscape plan. Although sources for native plants are somewhat limited, they may be found in nurseries, mail-order catalogs and other businesses. If a particular plant species cannot be found, ask the nursery to begin carrying it. As demand for native plants increases, commercial nurseries will begin carrying a wider selection. However, most commercial "wildflower" mixes contain species that are not native to Oklahoma (or even North America) and are able to reproduce without cultivation. Plants should not be removed from public areas and individuals should practice restraint when digging plants from populations on their property to ensure that the wild population is not damaged.

A yard harboring a diversity of native plants and wildlife will provide benefits for biodiversity. A well-developed landscape that uses native plants to attract wildlife will reduce the need for pesticides by providing natural control of insects and other pests. Diverse yards usually have fewer disease problems and require less maintenance. Well-designed yards with healthy plant communities often allow rain to soak into the soil and reduce flood and erosion problems. Small pools or backyard ponds in low areas catch and hold rain water or excess waters, also reducing flood problems. "Wildscaping" will provide owners a feeling of living close to the natural world and allow the development of bonds between people and nature.

This type of landscaping also can provide economic savings. Plantings around houses lower heating and cooling costs. Landscapes featuring native plants require little fertilizer and water. Some native grass species, such as buffalo grass, are well suited for lawns. They only attain heights of a few inches and need to be mown infrequently.

In all instances, landscaping with plants native to the ecoregion will minimize the impact of the

development on biodiversity. Using plants characteristic of the local area will maintain the uniqueness of the region and allow yards to blend into the natural environment as much as possible. This also will reduce dependence upon water and chemicals to maintain plants that are not adapted to local conditions. For example, homeowners living in ecoregions dominated by prairies can benefit biodiversity most by featuring prairie plots and wetlands in their yards rather than attempting to establish trees and shrubs. Landscapers and nurserymen should be given information about the benefits of using native plants, native plants that are well-suited for urban landscaping and encouraged to make them available to the public.

Rural lands. Biodiversity can be enhanced in rural areas by encouraging management or restoration of natural communities in association with pastures, small grain and hay fields, thickets, woodlots and fence row borders. Farming a variety of crops and using diverse rangelands rather than the monocultures that are widespread today should be encouraged, as should providing funding to landowners to create more diverse habitats. State and federal programs should provide native food and cover plants or seeds.

Demonstration areas on operating farms that receive no subsidies should be expanded and others established or identified statewide to illustrate how landowners can implement various biodiversity conservation practices and still maintain or enhance profitability. These could feature practices such as no-till cropping, use of native grasses, timber and firewood production, erosion control and contour strip cropping.

A major obstacle to restoring natural diversity on private lands has been the lack of economic incentive. Often, unless landowners see an immediate economic benefit, they are able to give only limited efforts to improving biodiversity on their land. Markets that would attach an economic value to healthy natural communities should be explored and shared with landowners to provide them with the opportunity of developing alternative income sources. State and local strategies to explore opportunities to make biodiversity an economic asset to landowners should be developed and applied on a locally.

Sensitive Natural Areas

Some areas or natural communities require special



Cave communities are especially sensitive to disturbance and water quality.

attention. These may be termed **sensitive natural areas**. Identifying these areas is the first step in managing them. Identification criteria may include the presence of one or more endangered, threatened or declining species or a population of a keystone species. Sensitive natural areas also may include unique or special community processes. Identification may be aided through the use of Geographic Information Systems, including the specific approach of Gap Analysis.

After sensitive natural areas are located, plans

should be devised to ensure their conservation. A recommended first step is evaluation for the Oklahoma Natural Areas Registry, a state-sponsored program staffed by The Nature Conservancy. When evaluations confirm the existence of sensitive natural areas, a management plan should be drafted in full consultation with the consent of the landowner.

Maintaining sensitive natural areas, contrary to widespread misconception, is usually not a passive, hands-off practice. Active management of these areas often is needed to maintain historical disturbances. Besides on-site considerations in management, attention should be given to impacts of adjacent land uses and how they can affect a sensitive natural area over time. Contingency plans should be developed for these areas to deal with severe flooding, drought, contaminant spills or other sudden and substantial impacts.

Public Lands

A statewide inventory of biotic resources (species and communities) on public lands—including state parks and wildlife management areas, highway rights-of-way and tourism facilities, state correctional facilities, public-school properties, and federal hatcheries and wildlife refuges—is needed to identify the biodiversity that occurs on these lands so they may be managed properly. Data from such inventories should be deposited the Oklahoma Natural Heritage Inventory and should be supported by voucher specimens (reference specimens to aid in identification) deposited in permanent collections. These inventories should be coupled with the development of accurate boundary maps for all state and federal management areas.

Steps should be taken to develop minimum conservation standards for public lands. Such standards need to include proactive management practices in which the conservation of biodiversity is an integral part of management operations and plans for new developments. These lands should emphasize the historic natural communities that characterize their region to maintain the uniqueness and character of Oklahoma. Such operations and plans should aim for

minimum impacts on the integrity of natural biotic communities. Efforts should be made to maintain or restore native biodiversity. Native species should be featured wherever possible and use of exotic species should be discouraged. Maintenance operations on public lands should identify and employ procedures that have low impacts on biodiversity. Pollution and soil-erosion standards should be enforced to protect both terrestrial and aquatic communities.

Managers of public lands should develop management plans for each area and periodically monitor them to ensure that biodiversity is not being compromised and to check progress toward achieving biodiversity goals for the state. Monitoring data should be compared among areas within each ecoregion. Systematic, scientifically defensible monitoring protocols should be developed and implemented. Such monitoring should be part of research efforts aimed at better understanding Oklahoma's biodiversity.

Public lands in developed areas, such as land around schools, government offices and other buildings, should be landscaped with native plants to the extent possible. Many of these areas, especially near schools, could be used as outdoor classrooms to educate the public about Oklahoma's natural heritage and the importance of biodiversity. Landscaping around public offices with native plants would help develop a sense of pride and appreciation for Oklahoma's natural resources.

Because of the expense of inventories, monitoring and managing public lands, state and federal agencies should investigate ways of funding these activities on public lands.

Biological Information Needs

Adequate conservation of biodiversity is impossible without a scientific understanding of the distribution of living things. Fortunately, much biological expertise is already available within Oklahoma. However, substantial gaps in our knowledge also exist, including an urgent need to assemble and standardize our existing knowledge, and to identify knowledge gaps that are serious impediments to the conservation of biodiversity.

Assembling Existing Knowledge

Expertise and data on Oklahoma's biota is decentralized. Scientists, collections, libraries and other scientific resources are distributed in state and federal agencies and academic institutions. Examples include data about the status and distribution of rare plants and animals, and ecologically significant communities in Oklahoma is collected by the Oklahoma Natural Heritage Inventory at the Oklahoma Biological Survey; the Oklahoma Gap Analysis Project at the Oklahoma Cooperative Fish and Wildlife Research Unit coordinated by Oklahoma State University is gathering distribution data on state terrestrial vertebrates, and public-lands management for regional conservation planning; an important database of yearly fish-sampling data, which catalogs stream fish species statewide, is maintained by the Oklahoma Department of Health. To a large degree, this decentralization is positive, because each party can tailor the organization of its resources to fit its needs. However, all parties would benefit from a smoother exchange of biodiversity data.

Data exchange is not as straightforward as it may seem at first. Different institutions have different computer systems and different capabilities for dealing with large data sets. In addition, agencies differ in how they classify communities, as well as which taxonomic treatments they follow. A further difficulty arises with priority in the data's use; clearly, an investigator who has devoted most of his or her career to collecting a particular data set should have appropriate recognition and have priority in publishing the results.

To facilitate the exchange of biodiversity data, the following recommendations are made (not in order of importance):

(1) Cooperation among parties with biodiversity expertise in developing common formats and standards for data acquisition and dissemination.

(2) Development of Memoranda of Understanding among parties to document the rights of each party to the data, as well as the services provided by each party.

(3) Development of a common, statewide Geographical Information System to ensure that

spatially-based data are compatible.

(4) Establishment of a common source of nomenclature (i.e., a synonymized checklist) for all major taxonomic groups, so that the meaning of a particular Latin binomial is recognized by all. Because nomenclatural treatments reflect the current understanding of the evolutionary relationships among organisms and this understanding is subject to change based upon new knowledge, parties must address provisions for revising the nomenclature.

(5) Agreement on standards for vouchering (i.e., providing a reference collection of organisms) distributional data.

(6) Cooperation with adjacent states in developing a database of biotic resources.

(7) Adherence to national or international taxonomic and community classification systems as a source of nomenclature.

(8) Coordination in developing permanent sampling networks (e.g., permanent vegetation plots) throughout the state to reduce duplication of effort.

(9) Cooperation in producing basic distribution maps for ecological communities and species.

(10) Encouragement of biodiversity-cataloguing projects such as an Oklahoma Bird Atlas Project, Flora of Oklahoma Project and the Oklahoma Gap Analysis Project.

(11) Continued tracking of the status and distribution of significant species and natural communities in Oklahoma by the Oklahoma Natural Heritage Inventory.

(4) Researching ecosystem integrity and function to learn the consequences of conservation or lack of conserving these communities.

(5) Development of a ranking system for the protection or restoration of natural community types.

Identifying Knowledge Gaps

In addition to assembling existing knowledge, we must direct our science to collecting new information in fields crucial to the conservation of biodiversity. Parties involved with conservation should support the following:

(1) Establishment of permanent plots and other permanent monitoring systems, especially in sensitive communities.

(2) Identification of biological inventory of poorly known habitat types or regions.

(3) Historical research on different communities to assess the natural or historical condition of the landscape.

(6) Basic biological education, as well as advanced education in field biology, so that expertise in biodiversity can be maintained into the future.

(7) Coordination among parties to prioritize information needs for conservation research or for conservation management.

Scientific Oversight

Scientific monitoring and evaluation are crucial to the long-term effectiveness of the Biodiversity Plan. New findings from specific sites around the state, along with more discoveries from the sciences of ecology, systematics and conservation biology, will offer opportunities to improve the conservation of biodiversity. Such new discoveries should be integrated into the Biodiversity Plan. Periodic monitoring and reassessment of statewide biodiversity and of specific natural areas will be needed to evaluate the plan's effectiveness.

Every five years or so, participants in the Biodiversity Project should meet to assess progress and to issue a "report card." Periodic meetings accomplish two important things. First, they help ensure that the Biodiversity Plan remains active and "on track." Second, they would maintain formal ties with this project's committees and ensure the free exchange of information and concerns. By maintaining high scientific standards and open communication, the Biodiversity Plan can do much to maintain Oklahoma's rich natural heritage. Perhaps most importantly, this important task can be accomplished in a cooperative, nonregulatory fashion.