Conservation partnerships in the lower Mississippi Alluvial Valley

Charles R. Loesch, Daniel J. Twedt, and Kenneth J. Reinecke

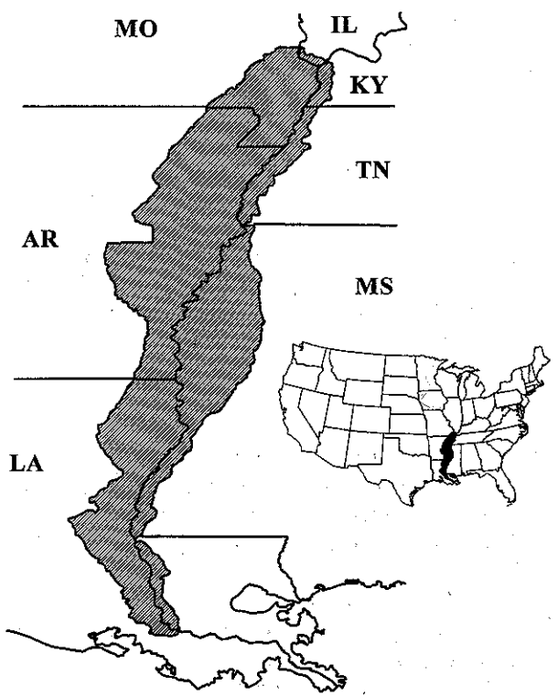
Partnerships help us reach our goals with less effort than if we had to reach them alone. And working with others can broaden our own vision. These authors report on a partnership that blends 2 major bird conservation initiatives.

In pristine times, the Mississippi Alluvial Valley (MAV) was America's largest river swamp—a rich habitat for wildlife and fish. Periodic flooding of the Mississippi River and its tributaries created fertile soils and supported growth of lush vegetation in the MAV, but also hindered development of its land and water resources for many years (Harrison 1961).

Flood control and agricultural increase

Following a devastating flood in 1927, the U.S. Congress passed the Mississippi River and Tributaries Act of 1928 and committed the Federal government to control catastrophic floods on the lower Mississippi River (Harrison 1961). In subsequent decades, conflicts between economic development and environmental protection increased as security from flooding, favorable agricultural markets, and improved technology encouraged widespread clearing of forests for crop production. Conservationists began focusing attention on the MAV in the 1960's when rates of land clearing exceeded 120,000 ha/year (300,000 acres/year; Holder undated, Yancey 1969, Forsythe 1985).

Conflicts continued in the 1970's as conservationists tried to use environmental legislation to slow the loss of forested wetlands. Debate centered on interpretation and implementation of the Fish and Wildlife Coordination Act of 1958 (16 U.S.C.



Mississippi Alluvial Valley

The Mississippi Alluvial Valley is the historic floodplain of the Lower Mississippi River and extends south from Cairo, Illinois to the interface of forested and coastal wetlands at the southern extent of the Atchafalaya Basin

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661–667e), the National Environmental Policy Act of 1969 (42 U.S.C. 4321–4347), and the Federal Water Pollution Control Act of 1972 (33 U.S.C. 1251–1376). Acquisition and protection of bottomland forests increased, but rates of land clearing still exceeded 40,000 ha/year (100,000 acres/year; Dahl et al. 1991, Hefner et al. 1994).

Legislation and iniatives

In the 1980's, the MAV was a rural and predominantly agricultural landscape, with only 20% of its bottomland forests remaining. Fortunately, new legislation provided opportunities for resolving conflicts between agriculture and conservation. The Farm Bills of 1985 and 1990 (Food Security Act of 1985 [PL 99-198]; Food, Agriculture, Conservation, and Trade Act of 1990 [PL 100-624]) included agricultural setaside programs and wetland conservation provisions such as swampbuster regulations, conservation easements, and the Wetland Reserve Program.

By the late 1980's, environmental degradation resulting from land use in the 1960's and 1970's and legislation enacted in the 1970's and 1980's created unique opportunities for federal, state, and private interests to protect existing habitats and restore degraded sites. A timely precedent was established in 1986 with the signing of the North American Waterfowl Management Plan (NAWMP). The NAWMP explicitly recommended forming partnerships between agricultural and wildlife interests as well as between private and public land managers to conserve habitat on a large scale. In 1989, Partners in Flight (PIF) identified similar partnership needs to address conservation of neotropical migratory birds in an effort coordinated through the National Fish and Wildlife Foundation. We describe how once independent NAWMP and PIF partnerships in the MAV evolved into a broad coalition for the conservation of migratory birds.

Lower Mississippi Valley Joint Venture

The Lower Mississippi Valley Joint Venture (LMVJV) was organized during the late 1980's to implement the North American Waterfowl Management Plan in the Lower Mississippi Alluvial Valley. The Joint Venture is comprised of many partners with varied participation. The most active partners include representatives from state agencies in the Joint Venture area (Arkansas, Illinois, Indiana, Kentucky, Louisiana, Mississippi, Missouri, Oklahoma, Tennessee, and Texas), several federal agencies (U.S. Fish and Wildlife Service, National Biological Service, Corps of Engineers, U.S. Forest Service, and Environmental Protection Agency), and non-government conservation organizations (The Nature Conservancy, Ducks Unlimited, and Delta Wildlife Federation). Waterfowl and wetland conservation is the primary theme of the LMVJV, and the explicit goals of the Joint Venture are to reverse long-term trends in wetland loss and to provide wetland habitat to support 8.7 million ducks and 1.4 million geese annually to fulfill NAWMP goals.

Implementation of the NAWMP in the MAV began in 1989 when the Lower Mississippi Valley Joint Venture Management Board approved a formal plan (Lower Mississippi Valley Joint Venture Management Board 1990). Primary goals of the LMVJV plan were to restore waterfowl populations, conserve wetlands, and form partnerships necessary to achieve conservation goals. Thus, the plan explicitly recognized partnerships as essential to effect sustainable large-scale changes on public and private lands needed to restore waterfowl populations.

The LMVJV established specific objectives for waterfowl populations and 3 wetland habitats (forested wetlands, flooded croplands, moist-soil areas). Many other species were expected to benefit to the extent that their habitat requirements were compatible with proposed management strategies. Certainly, the LMVJV goal to reforest >240,000 ha (>600,000 acres) had the potential to benefit numerous species. The LMVJV recommended assessing the qualitative effects of its waterfowl management strategies on neotropical migratory birds, shorebirds, and wading birds in an evaluation plan (Loesch et al. 1994). Detailed evaluation concerning wildlife other than waterfowl was beyond the scope of the Joint Venture. Instead, the LMVJV identified the need to expand partnerships to include other conservation initiatives such as PIF to more specifically address issues concerning neotropical migratory birds in the MAV.

Partners in Flight

The Neotropical Migratory Bird Conservation Program, better known as Partners in Flight–Aves de las Americas, was established in 1989 as a cooperative initiative for the conservation of neotropical migratory birds and their habitats. National and Regional Working Groups coordinate research, monitoring, information and education, and legislation; development of conservation plans and formation of local partnerships is the responsibility of working groups organized within physiographic areas. The MAV is 1 of 24 physiographic areas comprising the southeast region of PIF.

Within the MAV, conservation planning for neotropical migratory birds began with identification of species most in need of management or monitoring as evidenced by population declines, threats to

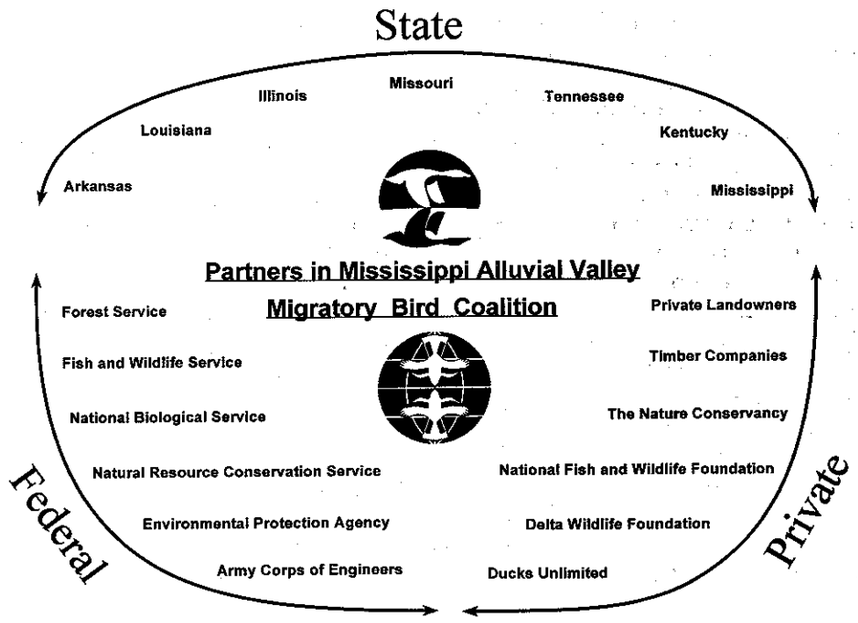
breeding or wintering areas, or limited geographic distributions (Hunter et al. 1993). Species identified in this process as high priority for conservation all breed in bottomland forests. Given this concern for breeding habitat of migratory forest birds and historic losses of bottomland forests, PIF adopted preservation of existing bottomland forests and restoration of former forested wetlands as preliminary habitat conservation goals. Thus, conserving bottomland forests emerged as a potential link between efforts of PIF and the LMVJV.

Integrating initiatives

Interactions between partners in the LMVJV and PIF existed informally for several years. Growth of this coalition since 1994 was the direct result of the NAWMP in response to North American Wetland Conservation Act of 1989 (NAWCA, 16 U.S.C. 4401–4412) funding considerations. The LMVJV area was chosen as a pilot area for the development of a wetland and migratory bird conservation plan that could be used to develop NAWCA grant proposals that better illustrated multiple species benefits. To date, Charles Baxter, LMVJV Coordinator, with the assistance of David Pashley, The Nature Conservancy, have coordinated the efforts of this coalition. Our roles in this effort vary from preparing reports and developing geographic information system uses to preparing research perspectives and evaluating program components.

Integrating the goals of multiple conservation initiatives requires common macro-habitat needs between the species of concern and well developed habitat objectives based on sound biological principles. By the early 1990's, the LMVJV had established habitat objectives for the conservation of bottomland forests, flooded croplands, and moist-soil areas sufficient to provide foraging opportunities for waterfowl during winter. Existing or restored forested wetland habitats in the MAV contribute to habitat objectives regardless of their size or location. Inspired by the LMVJV plan, PIF is in the final stages of developing population goals and habitat objectives for neotropical migratory birds in the MAV. These objectives, however, differ from those of the LMVJV in that they are linked to the number and distribution of contiguous forest blocks sufficient in size to support secure populations of area-sensitive, forest-breeding birds.

Informal meetings between participants in the LMVJV and PIF were initiated to integrate bottomland hardwood forest objectives for waterfowl and neotropical migratory birds, discuss ecosystem management and shorebird conservation, and address funding mechanisms related to the North American Wetlands Conservation Act. The partnership that developed from these meetings is not a new organization of federal, state, and private individuals, but an informal coalition between the 2 major conservation initiatives. In fact, most agencies and private conservation organizations were already involved, through different personnel, in both initiatives.



The Mississippi Alluvial Valley Migratory Bird Coalition is the result of a partnership formed between participants in the Partners in Flight and the Lower Mississippi Valley Joint Venture conservation initiatives. Most organizations identified are partners in both initiatives through independent representatives.

Because NAWCA targets wetland-dependent migratory birds, we wanted to incorporate shorebirds in this initiative. Consultation with the Western Hemisphere Shorebird Reserve Network identified foraging habitat during fall migra-

tion as the primary habitat need for shorebirds in the MAV; thus we developed habitat objectives around this need. Integration of habitat goals for shorebirds and habitat goals for waterfowl on moist-soil and agricultural cropland provided an additional opportunity to develop compatible management strategies between species groups.

Partnership benefits

Major benefits from this partnership include shared databases, development of joint habitat conservation strategies, opportunity to resolve potential conflicts, education of participants across interest groups, and increased program support. Partners frequently shared databases during the initial stages of this partnership because geographic databases purchased or developed by the LMVJV and its partners to inventory and evaluate waterfowl foraging habitat in the MAV contain spatial data needed to identify the amount, distribution, and fragmentation of forested habitat for neotropical migratory birds. As an example, boundaries of public lands were combined with land cover data derived from 1992 satellite imagery to identify core areas of forested habitat and related land ownership. These data were combined with information on distribution of forested wetlands in the 1950's to identify priority zones to focus conservation and restoration of forested wetlands. These priority zones were the foundation for forested habitat objectives for neotropical migratory birds and wintering waterfowl.

Integrated planning also provides an effective forum to resolve potential conflicts between management for the different species. The most important potential conflict between forest-breeding neotropical migratory birds and waterfowl is the amount and distribution of land that will be reforested versus the amount that will be managed as cropland or moist-soil habitat for foraging waterfowl. Resolution of this conflict will require coordinated reforestation planning; ideally open habitats can be located along the periphery of forests rather than the interior.

Generally dry conditions in the MAV during fall migration of shorebirds (late summer–early fall) limit habitat availability. We can provide foraging habitat for shorebirds by managing moist-soil impoundments on public lands for sparsely vegetated shallow water and mudflats during late summer, but this decreases foraging value of the same site for wintering waterfowl. This conflict can be resolved by increasing the total habitat objective for moist-soil and scheduling management activities to accommodate both groups of species (Fredrickson and Taylor 1982).

There has been very little resistance to this coalition. When interested individuals have been educated about the purpose and ideas behind developing integrated habitat objectives for migratory birds, they have been supportive. This approach is being used in the prairie habitat joint ventures and was highlighted as the approach to use in regional migratory bird conservation planning by PIF at their national meeting in October 1995.

Establishing this partnership was a learning experience for the individuals involved. We all tend to focus on concerns and conservation initiatives for species of special interest. Increased interaction between individuals involved in NAWMP and PIF increased recognition of the needs of species other than those with which we are normally concerned and resulted in conscious effort to consider other species groups in day-to-day decisions.

Ideally, the interactions we described will produce increased program support and corresponding management actions for the partners involved. While it is too soon to document progress in conservation from coalition efforts, a collection of diverse interest groups supporting projects benefiting a broad array of species groups will likely attract greater public support than a few, more narrowly focused interest groups. Attempts are currently underway to develop project proposals for North American Wetlands Conservation Act funding to incorporate concepts such as tangible multiple species benefits and landscape level reforestation to reduce fragmentation.

The future

Partners in the coalition view progress to date as a movement toward landscape-scale planning and ecosystem management. Opportunities exist to broaden this migratory bird coalition to include additional conservation initiatives. Integrating the population and habitat objectives currently being developed for riverine fishes by the Lower Mississippi River Conservation Committee and the goals established for large carnivores by the Black Bear Conservation Committee is viewed as a first step in this process.

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