

## WILDLIFE BENEFITS

Annual and long-term fluctuations in flooding have created a complex of forested wetland types that provide habitat for eight high-priority species of migratory and resident waterfowl: hooded merganser, Canada goose, gadwall, northern pintail, green-winged teal, ring-necked duck, mallard and wood duck. Reforestation of agricultural lands in the project area will improve habitat for migrant waterfowl by providing additional feeding opportunities in a variety of forested habitat types. Submerged and floating plants interspersed with scrub/shrub wetlands and different forest associations (bald cypress/water tupelo, overcup oak/red maple, pin oak/Nuttall oak and willow oak/cherrybark/oak) provide waterfowl an abundance of food, including seeds, insects, snails, spiders, crayfish and other foods. During winter months shrub/scrub and forested wetlands provide roost habitat that help waterfowl conserve body heat and avoid disturbances from natural predators. These forested wetlands are also used as pair bonding sites by many species during spring migration and provide critical brood habitat for resident wood ducks and hooded mergansers. Reforestation of agricultural land in the batture is both economically and ecologically effective because most of the land has not been leveled, which ensures a more diverse array of forested wetland habitat types will be available to wildlife.

The loss and fragmentation of forest habitat in the region, along with the loss of complex forest structure, has contributed to declining population trends for many forest-dwelling songbirds, certain raptors and a forest-dwelling shorebird, the American woodcock. Specific nesting habitat requirements vary among species, but many forest-interior songbirds share broad requirements for complex vertical and horizontal forest structure for nesting and foraging. Two songbirds of high conservation concern, Swainson's warbler and cerulean warbler, are among the species that depend on larger, more complex forested blocks that can be provided through restoration and management. Other songbird species of concern, including prothonotary warbler, Kentucky warbler and Acadian flycatcher, also will benefit from forest restoration. One forest-dwelling raptor species of high conservation concern, the swallow-tailed kite, has been nearly extirpated from all but the southern portions of the project area. Experts believe it may re-populate the Lower Mississippi River region as larger forest blocks are restored. The first nesting attempts in nearly a century were recorded in Arkansas in recent years.

The project area forms part of one of the continent's major migratory routes, the Mississippi Flyway. Some 60 percent of the bird species found in North America use Lower Mississippi River habitats during their life cycles. Dozens of forest-dwelling species traverse the region to and from northern nesting grounds and wintering areas in the tropics. Some, such as the rusty blackbird, nest in the boreal forests of Canada but depend heavily on Lower Mississippi River forests for wintering. The population of rusty blackbirds has declined more than 90 percent in the last 40 years, as both its nesting and wintering habitats have diminished.

A spatially explicit model for forest restoration has been proposed by scientists at the Lower Mississippi Valley Joint Venture (LMVJV) that would benefit forest-dwelling birds and other terrestrial species, such as the Louisiana black bear. Decision-support tools can be used to target forest restoration to achieve the most efficient reconnection of forest blocks, including those in the batture and the area landward of the Mississippi River levees. Targeted restoration proposed by the LMVJV could ultimately lead to reforestation of more than 2 million acres, increasing the area of forest present in the region to levels comparable to the 1950s.