



Habitat Ingredients for Wintering Ducks

By Drs. Rick Kaminski and Aaron Pearse

MOST WATERFOWL CONSERVATIONISTS know the basic ingredients of their favorite duck gumbo or other fowl cuisine. But, do most know the habitat ingredients of Mississippi Delta landscapes that attract abundant mallards and other dabbling ducks during winter?

That was the question waterfowl ecologists, Drs. Aaron Pearse and Rick

Kaminski in the Department of Wildlife and Fisheries, Mississippi State University (MSU), addressed recently as part of Aaron's doctoral research. For three winters (2003-2005), Aaron flew thousands of miles of aerial surveys 500 feet above ground following east-west transects across the entire Mississippi Delta from about 30 miles south of Memphis, Tennessee to near Natchez and Vicksburg, Mississippi. Important objectives of Aaron's surveys were to estimate the abundance of mallards and other ducks during winter and determine habitats used by the birds. The MDWFP was the primary research sponsor, along with the Anderson-Tully Company, Delta Wildlife, Ducks Unlimited, Inc., the MSU Forest and Wildlife Research Center, the Jack H. Berryman Institute, and the U.S. Fish and Wildlife Service.

Each time Aaron observed ducks along

transects, he identified them and the habitat they used (e.g., flooded cropland, natural wetland, etc.), recorded their numbers, and specific location with a GPS receiver. Wildlife scientists were especially interested in determining the mix of wetland types (aka "wet-

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land complex") over 12,000-acre parcels of the Delta that attracted the largest observed groups of mallards and other dabbling ducks during January, when duck numbers generally peak in the Delta. The 12,000-acre landscapes were based on the average size of state and federal wildlife management areas in the Delta, and the largest observed groups of ducks each were at least 100 mallards and 200 other dabbling ducks.

Large numbers of mallards and other dabblers used complexes containing several wetland types in the Delta. Both mallards and other dabblers were attracted to areas composed of about 50% flooded cropland, 20% forested (e.g., bottomland hardwoods) and/or

scrub-shrub wetlands (e.g., button bush, willow, privet), 10-20% seasonal wetlands (e.g., moist-soil), and the remainder in permanent water such as rivers and catfish ponds (see pie chart diagram). Additionally, researchers

found that a high diversity and interspersion of wetlands were positively related to the occurrence of ducks in abundance.

Indeed, duck habitat, like good gumbo, contains a diversity of ingredients. So, as you develop your

duck holes and management areas, strive to include all the important wetland ingredients: flooded cropland, forested and scrub-shrub, moist-soil, and permanent wetlands. Moreover, don't forget to include permanent sanctuary areas where ducks can feed, rest, and form pair bonds in peace and quiet during the hunting season. If you follow this recipe, you'll have a fine wetland complex fit for fowl and waterfowlers.

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