

Big Muddy National Fish & Wildlife Refuge
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V/TTY Users may reach Big Muddy NFWR
through the Federal Relay System at
1 800/877 8339

U.S. Fish & Wildlife Service
1 800/344 WILD
www.fws.gov



U.S. Fish & Wildlife Service

Big Muddy

*National Fish
& Wildlife Refuge*



*“...this immense river
so far as we have yet
ascended, waters one
of the fairest portions
of the globe, nor do I
believe that there is in
the universe*

*a similar extent of
country, equally fertile,
well watered, and
intersected by such a
number of navigable
streams.”*

Meriwether Lewis



*Diana Scour surrounded by fall splendor;
Overton Bottoms North Unit, Barbara Moran, USFWS*



Big Muddy National Fish & Wildlife Refuge Units



This Blue Goose, designed by J.N. "Ding" Darling, has become the symbol of the National Wildlife Refuge System.

Welcome!

The Big Muddy National Fish and Wildlife Refuge was established in September 1994 as part of the National Wildlife Refuge System. The network of approximately 550 refuges is a living heritage, conserving wildlife and habitat for generations to come.

Like pearls on a string, the refuge lands are gems in the almost million-acre lower Missouri River floodplain. Refuge units occur in the floodplain between Kansas City and St. Louis.



Great Blue Heron, D. Hardesty



White-tail Deer, American Bittern, D. Hardesty

Taming a Wilderness Route

For thousands of years, the Missouri River has been a travel route for wildlife and humanity. The rich riverine habitat made it the market place for their survival. The river often reveals its past through exposed artifacts left behind by its former users.





Fur traders descending the Missouri, George Caleb Bingham, The Metropolitan Museum of Art, Morris K. Jesup Fund, 1933 (33.61) Image © The Metropolitan Museum of Art

Things began to change on the river soon after the Lewis and Clark expedition (1804-1806). The first steamship arrived on the river a decade later, burning wood from the virgin floodplain forests. Wildlife became scarce due to habitat loss and market hunting.



Workers paving the banks of the Missouri, 1939,
U.S. Army Corps of Engineers

Over the next century more than 300 steamships sank in the Missouri River. Its murky, swift water hid snags and shallow shoals ready to rip through a ship's hull. Efforts to control the river began full scale at the turn of the 20th century.

Congress enacted the Missouri River Bank Stabilization and Navigation Project to control the river by building pile dikes to direct flow and prevent bank erosion.

By the 1950s, the Missouri River had been channelized from Sioux City, Iowa, to St. Louis, Missouri. Channelization reduced fish and wildlife habitat by separating the river from its floodplain.



Snags on the Missouri River;
Karl Bodmer, Photo courtesy of the Edward E. Ayer Collection, The Newberry
Library, Chicago

Wandering Waters Create Homes for Wildlife

Pockets of refuge lands are now a haven for wildlife along the Missouri River. The refuge strives to restore natural floodplain habitats for fish and wildlife. Chutes, backwaters, scours/ponds, sandbars, bottomland forests, wet prairie/grasslands, and seasonal and permanent wetlands provide homes for wildlife.

Wetlands created by the river provide resting and feeding areas for migrating waterfowl, including mallards, wood ducks, and blue-wing teal. Water birds such as green heron, American bittern, and American coot also thrive in these areas.



Scour holes become pools ideal for aquatic turtles and fish such as crappie and flathead catfish. River floods naturally restock these pools and provide enriching nutrients.



Large sandbars provide important resting and feeding areas for migrating shorebirds. Species you might see include spotted sandpiper and greater yellowlegs.



*Photos, from top:
Blue-winged
Teal,*

© S. Cummings,

*Midland
Smooth
Softshell
Turtle, T.*

Haller, USFWS,
Yellowlegs, D.

Dewhurst, USFWS



Killdeer; D. Hardesty

River Returned

Congress recognized the great loss of fish and wildlife habitat and in the 1980s established the Missouri River Mitigation Project to recreate some lost habitat through the purchase of land that could be used to reconnect the river to the floodplain.

Extensive flooding in 1993 revived the concept of a national wildlife refuge on the Lower Missouri River. The U.S. Fish and Wildlife Service purchased the first parcel in 1995 and currently manages fifteen units along the Missouri River.

*Baltimore Bottom Unit during 2007 flood event,
USFWS*



Patches of bottomland forest and wet prairie contribute valuable habitat for nesting and migrating songbirds. Interesting migrants include cerulean warbler; tree swallow, indigo bunting, and dickcissel.

Seasonal floodplain wetlands provide valuable habitat for a variety of amphibians such as spring peepers, green frogs, and narrow mouth salamanders.

New river side channels and chutes provide slower flowing water used by many native fish, such as blue chub, sauger, paddlefish, and the endangered pallid sturgeon.



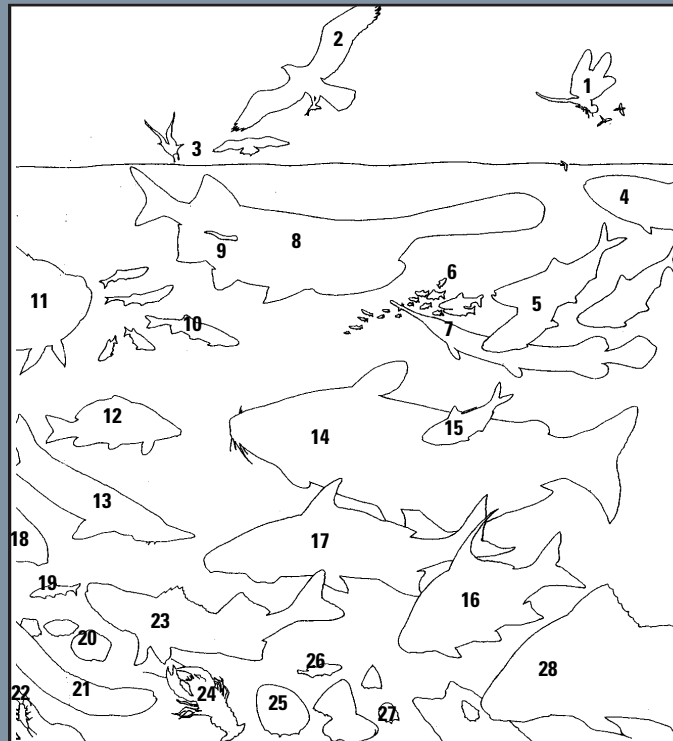
*Photos from top left:
Pearl Crescent
Butterfly on
Daisy Fleabane,
Spotted
Salamander;
Three Toed Box
Turtle, Wild
Turkey,
Wood Duck,
Great Blue
Heron,
Northern
Cardinal,
White-tailed
Deer, All Doug
Hardesty, Bald
Eagle, Steve
Hillebrand, USFWS*





About the Cover Art

The cover artwork was produced by the Kentucky Department of Fish & Wildlife Resources with support from the U.S. Fish & Wildlife Service *Sport Fish Restoration Program*.



River Residents

- | | |
|--------------------------|----------------------------|
| 1 Green Darner Dragonfly | 15 Threadfin Shad |
| 2 Osprey | 16 Highfin Carpsucker |
| 3 Ring-billed Gull | 17 Blue Sucker |
| 4 Mooneye | 18 Smallmouth Buffalo |
| 5 Skipjack Herring | 19 Silver Chub |
| 6 River Shiner | 20 Mapleleaf Mussel |
| 7 Longnose Gar | 21 American Eel |
| 8 Paddlefish | 22 Stonefly Nymph |
| 9 Silver Lamprey | 23 Sauger |
| 10 Emerald Shiner | 24 Crayfish |
| 11 White Bass | 25 Butterfly Mussel |
| 12 Carp | 26 River Darter |
| 13 Shovelnose Sturgeon | 27 Pointed Campeloma Snail |
| 14 Blue Catfish | 28 Freshwater Drum |

You Can Help!

The *Friends of Big Muddy*, a non-profit group, supports the refuge by organizing volunteers for refuge activities. They also bring greater public awareness and support for the mission of the refuge. For more information on the Friends, visit them on the web at:

www.friendsofbigmuddy.org.

Volunteers perform a wide variety of jobs, and the refuge tries to match each volunteer's skills and interests with work that is needed. If you are interested in volunteering for the refuge, please contact the refuge, or check out jobs on the web at:

www.volunteer.gov.



*Ruby-throated Hummingbird
on Trumpet Creeper; Doug Hardesty*

*Wildlife
Comes First!*



*American
Kestrel,
D. Hardesty*

Hunting



Refuge Rules & Regulations

Although wildlife comes first on national wildlife refuges, many recreational opportunities are available. Refuge rules are posted at information boards located at the main parking area of each unit. Specific regulations for that unit are also posted. Refuge-wide regulations always apply. The refuge is open 24 hours a day for permitted activities.

Fact Sheets

Fact sheets for individual units show more details about opportunities and regulations on the refuge. Unit fact sheets are posted on our website and are available from the refuge office.

Enjoy Your Visit!

Hunting is permitted in accordance with State of Missouri seasons. Hunting is subject to all applicable state and federal laws. Be aware that some portions of the refuge are open for archery hunting only.

Firearms



Firearms are permitted during open hunting seasons by licensed hunters. Target shooting is prohibited.

Trapping

Trapping is prohibited on all areas of the refuge.

Fishing



Fishing is allowed year round and is subject to all applicable state and federal laws.

*Wildlife
Observation &
Photography*

The refuge offers many opportunities for wildlife observation and photography.

Vehicles



All vehicles are restricted to designated roads and parking areas. Vehicle speed limit shall not exceed 25 mph except as otherwise legally posted.



*Barred Owl,
USFWS*

Camping



*Kayaking,
S. Hillebrand,
USFWS*

Camping and unauthorized overnight use on the refuge is prohibited. Sandbars below the ordinary high water mark of the Missouri River are managed by the state and camping is usually allowed.

Harvest of berries, mushrooms, and nuts for personal use only is allowed. Disturbing, injuring, and damaging any plant or animal, except fish and game taken in season, is prohibited. Collecting of other objects, including shed antlers, is prohibited.

*Domestic
Animals*



Horseback riding is prohibited. Pets must be leashed except when under control of hunter during appropriate hunting season.

*Historical
Artifacts*



Artifacts and historical items are protected; collecting them is prohibited.

Directions, Office Hours

The refuge headquarters is open Monday through Friday from 7:30 am to 4:00 pm except on major holidays.

In Columbia, Missouri, take Highway 63 to the AC/Grindstone Parkway. Turn east onto New Haven Road. Continue past New Haven School for approximately one mile. The Columbia Environmental Research Center will be on your right. Turn right into the third (last) driveway of the Center. Take an immediate left through the gate, then an immediate right and follow the parking lot past a storage facility to the headquarters office.



*Scanning the
Skies, USFWS*