

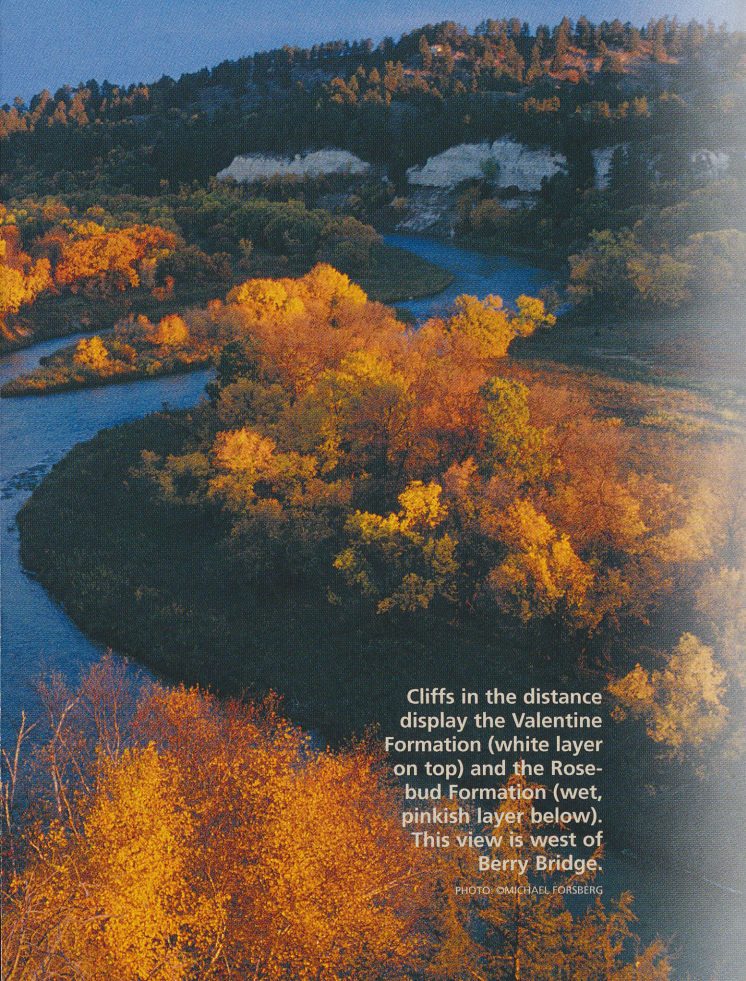
Niobrara

National Park Service
U.S. Department of the Interior

National Scenic River
Nebraska



Ni obhatha ke—spreading water river. For centuries the Ponca and Omaha Indians fished, hunted, and camped along this remarkable river. The Niobrara River, known for its beauty, biological significance, and paleontological resources, is enjoyed as a superb canoeing river of the Great Plains. In 1991 Congress designated 76 miles of the Niobrara east of Valentine, Nebraska, as part of the national Wild and Scenic Rivers System. The Niobrara—a river that deserves recognition and special protection for you and future generations.



Cliffs in the distance display the Valentine Formation (white layer on top) and the Rosebud Formation (wet, pinkish layer below). This view is west of Berry Bridge.

PHOTO: MICHAEL FORSBERG

A Past Revealed in Rocks



©CHUCK HANEY

River Valley Geology

The Niobrara River begins in the high plains of eastern Wyoming and flows 535 miles to its confluence with the Missouri River in northeastern Nebraska. Springs and seeps feed the Niobrara as it flows eastward through vast rolling grasslands.

Ancient meandering rivers and shallow seas once covered this area and laid down thick layers of sand, gravel, and silt, creating a large alluvial plain that extended eastward from the Rocky Mountains. After extensive uplift, several cycles of erosion and deposition occurred, which gradually created the Great Plains. Volcanic activity to the west deposited layers of ash over much of the area. These layers were covered by eolian (wind blown) sand. The Sandhills in Nebraska, the most extensive of these dune areas, abut the Niobrara River's southern shore and cover 19,000 square

miles. Today the Niobrara River drains 12,000 square miles and cuts through several rock formations (see diagram below).

On top is the Ash Hollow Formation, a ledge-forming grayish sandstone. It is best seen on hills north of the river and in roadcuts along highways such as Nebr. 12.

The Valentine Formation, a soft poorly cemented sandstone, forms cliffs and slopes along both sides of the river. This formation has an abundance of fossils, including mammals such as horses, camels, rhinoceros, and mastodons.

Next lies the Rosebud Formation, a hard pinkish gray to brown sandstone. Because much of the Niobrara River flows directly over this resistant bedrock, the water is clear with frequent stretches of riffles and rapids.



©MIKE WHITE

The Ash Hollow Formation forms the caprock of the Niobrara River valley (second left). Fossils found here include tortoises, horses, and camels.

More than 200 waterfalls occur along the western part of the river, mostly on north-facing slopes. These tributaries flow over the erosion-resistant Rosebud Formation. Some waterfalls drop into the Niobrara; others fall into side-streams that flow into the river. Smith Falls (left) plunges 63 feet, then cascades to the Niobrara.



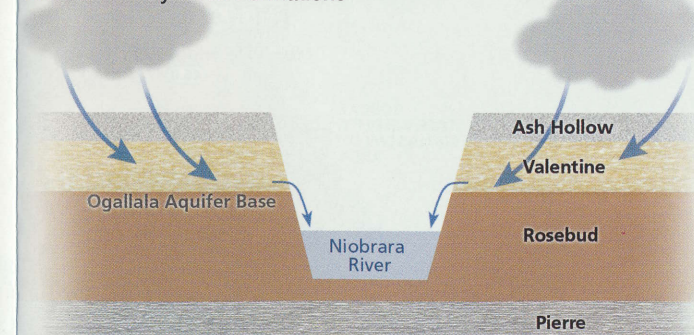
©LAURA WILLIAMS, UNIVERSITY OF NEBRASKA STATE MUSEUM

Gomphotherium (four tuskers) and fossils of other mammalian species are found in the Valentine Formation.

The Pierre Formation, composed of laminated shale, holds fossils from sharks and marine reptiles.

The Ogallala Aquifer, a large deposit of underground water, formed over eons from precipitation that saturated sand and rock layers. In the Sandhills, water at or near the surface creates lakes and wetlands. The Niobrara River has cut more than 300 feet into the plains, allowing water to seep out of valley walls into the river.

Niobrara Valley Rock Formations



Life on the Edge of the Prairie



©CHUCK HALEY



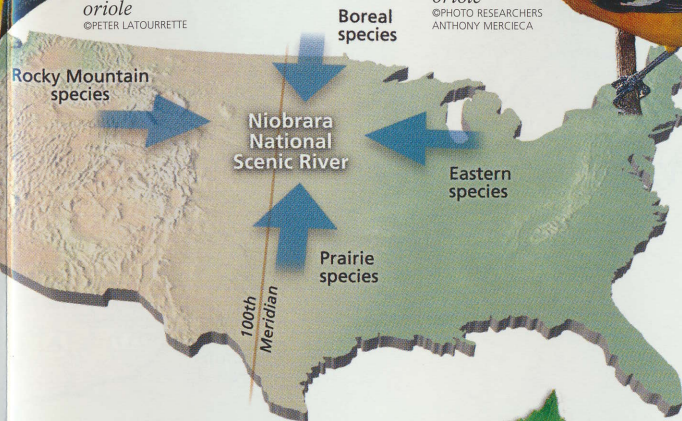
Bullock's oriole
©PETER LATOURETTE

Although the 100th Meridian may be an imaginary line on a map, this geographic boundary is used to differentiate the western and eastern United States. Along this line dry western and humid eastern air masses collide, leading to increased precipitation along the river.

This blending of ecosystems allows some species to interbreed, such as the western Bullock's oriole and eastern Baltimore oriole.



Baltimore oriole
©PHOTO RESEARCHERS
ANTHONY MERCECA



Niobrara River Valley: Biological Corridor

In north-central Nebraska the 100th Meridian runs north and south through the Niobrara River valley. Here an unusual blend of climate, geology, and topography provides for an incredible diversity of plants and animals. Varying exposure to sun, wind, and moisture determines vegetative communities and their dependent wildlife. Downstream (east) the diversity increases as the predominantly western species mingle with other life and are gradually replaced by eastern plants and animals. At least 83 eastern species reach their western range limits and 47 western species approach their eastern limits in the Niobrara River valley.

Rocky Mountain plants include ponderosa pine, serviceberry, and horizontal juniper. These plants

grow on the drier hillsides and canyon slopes on both sides of the river.

Eastern deciduous forests grow on the moist bottomlands and islands along the Niobrara. They include American elm, cottonwood, green ash, bur oak, hackberry, and box elder. Boreal forest species grow on north-facing slopes, where shade and abundant groundwater in the forms of streams and seeps create cooler microclimates. Paper birch, basswood, aspen, ferns, and club mosses grow here.

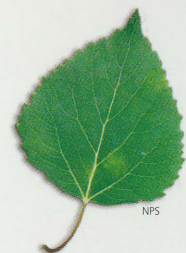
Three types of prairie are found in the river valley, displaying a botanical transition among the eastern tallgrass prairie, the mixed grass prairie of the Sandhills, and the western shortgrass prairie. In the river, minnows such as sand shiners, red shiners, and flathead

chubs search for aquatic insects near streambank margins. Larger fish, such as rainbow and brown trout, prefer cooler, clear water where spring-branch tributaries enter the river. Channel catfish, a popular game fish of the Niobrara, prefer deeper water or cover in the day and feed at night in riffles. They can reach weights of more than 30 pounds.

Watch closely and you may spot soft-shell, snapping, or painted turtles sunning on logs in the summer. You may see a bull snake swimming across the river or spy a garter snake hunting in vegetation along the river banks.



Spiny softshell turtle
©NEBRASKA GAME
AND PARKS COMMISSION



Thousands of years ago the climate was cooler and wetter in the valley. Both quaking aspen (the most widely-distributed tree in North America) and big-toothed aspen (an eastern species) grew along the river.

As the climate began to change, these aspen adapted to survive by developing a hybrid (see leaf above). Today a colony of these unusual aspen grows at the foot of Smith Falls.

Floating the Niobrara River



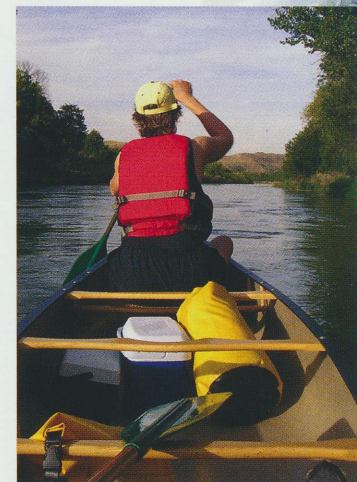
PHOTO: NPS, ILLUSTRATION: NPS/GREG HALLIN

When To Go

Most visitors float the river from mid-June through Labor Day. Summer weekends can be very busy. Water levels are higher from April through mid-June, but you may encounter unsettled weather and cooler temperatures during these months. Winter floats are possible from Fort Niobrara to Smith Falls, but the river can ice-up and become impassable. Only experienced and properly equipped boaters should attempt a winter trip.

The 22-mile river segment from Fort Niobrara National Wildlife Refuge, near Valentine, to Rocky Ford Rapid is the most frequently traveled section. Trips ranging from one-hour floats to several days can be arranged with local outfitters.

For More Information For river conditions and more information call the Valentine ranger station: 402-376-1901.



©STUART SCHNEIDER

September and October showcase spectacular colors as trees change to fall foliage (photo at top).

This bow paddler keeps a watchful eye for rocks and other obstacles (above).



Safety on the River

- Ask outfitters for paddling tips, especially if you are unfamiliar with boating techniques.
- Always wear a personal flotation device (PFD). It's no help at the bottom of your canoe. Children under 13 *must* wear a PFD while on the river.
- If you capsize, stay upstream from your boat. Currents pushing against a canoe can trap and hold you underwater.
- If you capsize in rapids, try to swim aggressively to the bank or an eddy. Otherwise, stay on your back and keep your feet pointed downstream, letting your PFD keep you afloat. Swim to shore after reaching calmer water.
- Rapids and unmarked hazards can occur at any time. Scout ahead. In summer major rapids and falls are signed between Valentine and Norden Bridge. Boaters are strongly cautioned

to portage around these dangerous obstacles.

- Avoid overhanging limbs and submerged logs that can overturn a boat and cause injury.
 - Wear sturdy shoes. Sharp objects can cut bare feet.
 - Be aware of land hazards such as poison ivy, stinging nettles, ticks, slippery banks, crumbling cliffs, and rattlesnakes.
 - If thunderstorms or windstorms occur, get off the water quickly.
 - Do not dive or jump into the river. The Niobrara can be shallow, with many rocks.
 - Connecting tubes together may be hazardous—people can get trapped under the tubes.
 - Wear sunscreen, sunglasses, a hat, and insect repellent.
 - Cell phones may not work in the river valley. Rocky Ford Rapid has a public phone.
- Emergencies: call 911.**

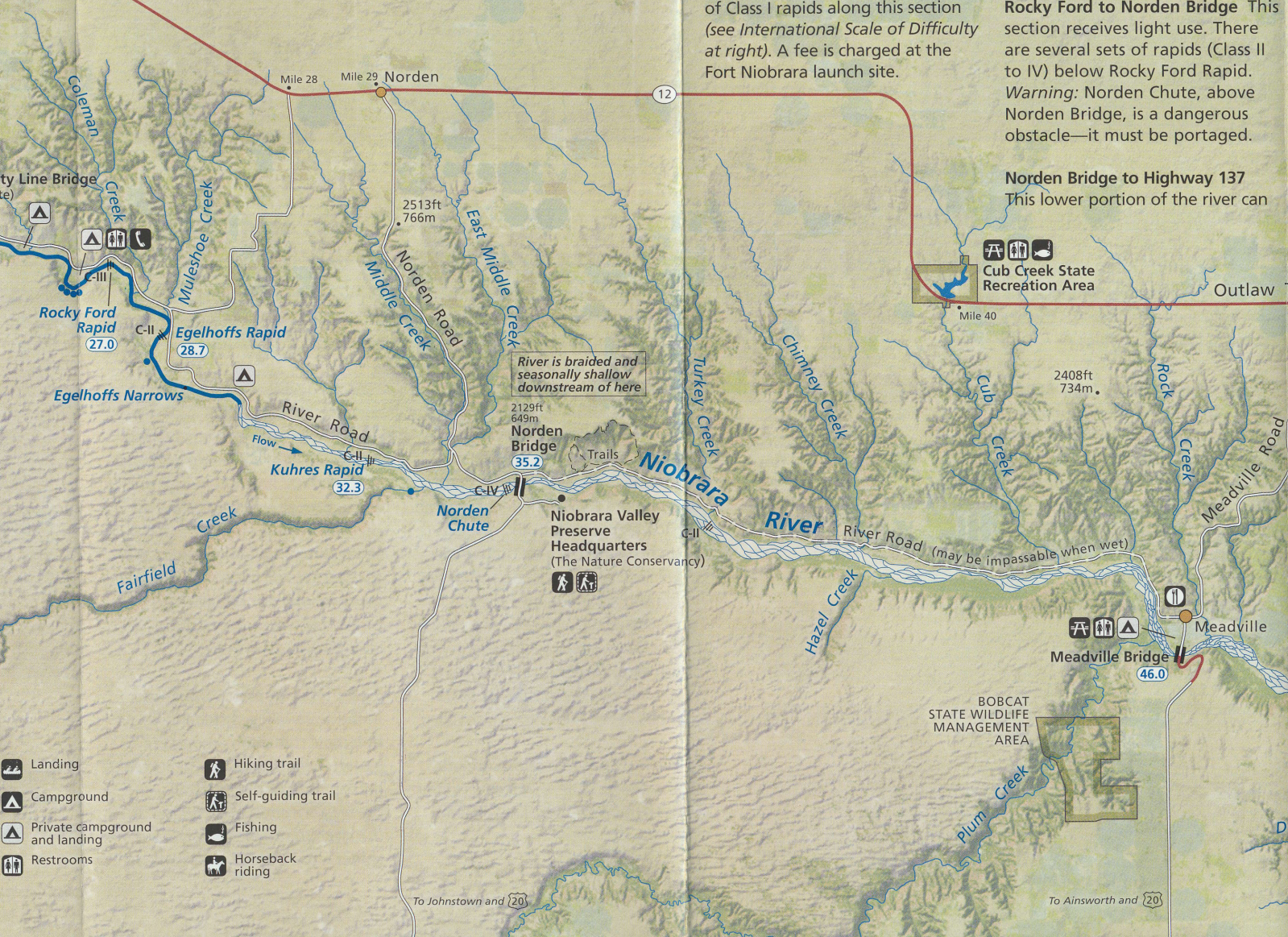
Exploring the Niobrara River



Niobrara National Scenic River is one of more than 380 parks in the National Park System. The National Park Service cares for these special places so that all may experience our heritage. To learn more about national parks visit www.nps.gov.

Planning Your Visit

Niobrara National Scenic River offers 76 miles of navigable waters for paddlers. The western portion, from Fort Niobrara to Rocky Ford Rapid, is the most popular section among floaters. Along this stretch outfitters offer rentals for boating, tubing, fishing, hunting, horseback riding, camping, and cabins. The eastern portion of the river is seldom floated. It is often shallow, with a braided channel and undeveloped access points; it is not served by outfitters. It can offer a peaceful float to resolute paddlers.



On The River

Borman Bridge to Cornell Dam

This stretch includes a section that is closed to all visitors. The U.S. Fish and Wildlife Service maintains this closure to ensure visitor safety and protect wildlife habitat.

Cornell Dam to Berry Bridge The river flows through a federally designated wilderness. Riverbanks are undeveloped, with pine-covered hills, prairie, and steep cliffs as a backdrop. There are two segments of Class I rapids along this section (see *International Scale of Difficulty* at right). A fee is charged at the Fort Niobrara launch site.

Berry Bridge to Brewer Bridge The river continues through forested hills of pine and deciduous trees, with a number of easy riffles.

Brewer Bridge to Rocky Ford Here rapids (Class I or II) are easily negotiated by most novices. These rapids can change in character with differing water levels. *Warning:* At Rocky Ford Rapid (Class III), floaters and canoeists need to portage the falls.

Rocky Ford to Norden Bridge This section receives light use. There are several sets of rapids (Class II to IV) below Rocky Ford Rapid. *Warning:* Norden Chute, above Norden Bridge, is a dangerous obstacle—it must be portaged.

Norden Bridge to Highway 137

This lower portion of the river can

Guidelines and Regulations

be floated, but lack of public boat launches, shallow water, and sandbars make the trip difficult.

International Scale of Difficulty

Class I: Fast moving water, riffles, and small waves. Few obstructions.
Class II: Basic rapids with wide, clear channels. Obvious without scouting. Some maneuvering required.
Class III: Rapids with moderate, irregular waves often capable of swamping open-bow canoes. Fast currents and narrow passages require complex maneuvering. May require scouting from shore.
Class IV: Difficult rapids, irregular waves or dangerous obstacles, rocks, and falls. Powerful and precise maneuvering required in very turbulent water. Scouting required. Rescue may be difficult. Unsuitable for an open canoe.

- Private lands border the river in most areas. Respect private property rights—do not trespass. Please do not harm plants, collect fossils, or disturb animals.
- Secure and waterproof your belongings and garbage in your craft to keep them from falling into the river. Avoid bringing glass or styrofoam containers.
- Many visitors come to relax and enjoy a peaceful river experience. Please respect others by refraining from inappropriate noise and behavior.
- Don't climb on crumbling cliffs or delicate waterfalls.
- Using alcohol or drugs while on the river can cause injury and death. Alcohol is prohibited within Fort Niobrara National Wildlife Refuge. The consumption of alcohol is prohibited at Smith Falls State

Park and Brewer Bridge.

- Fishing and hunting licenses are required, as is landowner permission to hunt on private land. State fishing and hunting regulations apply within the river boundary. Hunting is prohibited at Fort Niobrara National Wildlife Refuge.
- Use principles of *Leave No Trace*. Pack it in—pack it out.
- All motorized boats are discouraged due to the shallow, rocky nature of the river. Personal Watercraft (PWC or jet-skis) and airboats are prohibited.

Emergencies: call 911.

Fees Fort Niobrara National Wildlife Refuge charges a launch fee. Smith Falls State Park charges entrance and campground fees.

Services

Lodging, Food, and Services These are found in nearby towns. Contact:

Valentine Chamber of Commerce
239 South Main
Valentine, NE 69201
402-376-2969
www.heartcity.com

Ainsworth Chamber of Commerce
335 North Main
Ainsworth, NE 69210
402-387-2740
www.ainsworthlinks.com

Camping and Boat Launches Private campgrounds and launch sites are found along the river between Fort Niobrara National Wildlife Refuge and Meadville. Make prior arrangements for camping and river access. Camping is available at Smith Falls State Park and Meadville.

More Information

Niobrara National Scenic River
P.O. Box 319
146 South Hall Street
Valentine, NE 69201
402-336-3970 (headquarters)
402-376-1901 (recorded message)
www.nps.gov/niob

Fort Niobrara National Wildlife Refuge
HC 14, Box 67
Valentine, NE 69201
402-376-3789
<http://fortniobrara.fws.gov>

Smith Falls State Park
HC 13, Box 25
Valentine, NE 69201-9103
402-376-1306
www.ngpc.state.ne.us

Niobrara Council
280 N. Main Street
Valentine, NE 69201
402-376-2793
www.niobraraCouncil.org

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