

The Middle River is a "non-meandered stream". This legal term, not to be confused with the character of the river, means that the river bed, sandbars and banks are part of the adjacent property. While the water is held in public trust for the citizens of the state, please be mindful that the land is private. Portaging around an obstruction, however, is allowed.

Electric fences to contain livestock are allowed to cross the river, and may be encountered on the upper reaches of the



MADISON COUNTY

water trail. Paddlers may need to portage around the fenceline, but should respect private property.

Paddlers need to be aware that stream reaches outside the designated Water Trail are not signed from the river (gray areas on map).

MIDDLE RIVER - ROCKY RIFFLES AND COVERED BRIDGES

This serpentine water trail travels through dozens of rocky riffles and under the famous Roseman and Holliwell Covered Bridges of Madison County. Beautiful limestone bluffs and shale layers border the trail, along with dense woodlands and grasslands. Wildlife take advantage of the habitat the Middle River provides. Watch for great blue herons, belted kingfishers, and wood ducks along the shore. Red-tailed and broad-winged hawks can be seen soaring above the river valley. Freshwater mussels, crayfish, snails, frogs, toads, snakes, and turtles inhabit the river. Take time for wildlife watching at Pammel Park, a part of the central Iowa Makoke Birding Trail.

This river is not for beginners. Careful attention and intermediate to advanced paddling skills are necessary to successfully navigate rapids/riffles and

required, especially at lower water levels.

Cover photograph was taken by Todd Halverson.

Photo by

Steve Pearson

Scarlet

Tanager

avoid obstacles. Portaging may be

Bedrock shell fossils lowa DNR photo

Shell fossils can be found in the bedrock and on rock bars throughout the upper reaches of the river, including just upstream of the Roseman Covered Bridge access. These fossils are reminders that ancient seas covered the area over 300 million years ago.



Side view of Roseman covered bridge

Roseman and Holliwell Covered Bridges

These bridges are just two of the six famous and popular covered bridges in Madison County. They are excellent examples of nineteenth century utilitarian ideas reflected in construction. Both of these bridges have also been featured in *The Bridges of Madison County*, popular literary and cinematic works.

The Roseman Covered Bridge was constructed in 1883 by Harvey Jones. It spans 230 ft across the river and is 14 ft wide.

The Holliwell covered bridge was the first of its kind, constructed in 1880 by Harvey Jones and George Foster. It spans 110 ft across the river and is 14.5 ft wide.



Harmon Tunnel
Courtesy of www.urbandsm.com

Seeing the potential to harness the power of the river as a flume for a future mill, the Harmon Tunnel was completed in 1859 by John Harmon and his sons over the course of three years. Although the mill buildings have long since gone, the tunnel remains. It was widened for road traffic in 1925 and continues to be a local attraction.

Pammel State Park

Pammel State Park was dedicated in 1930 as one of the first state parks in Iowa. Named after Dr. Louis Hermann Pammel, a botanist, educator, and conservationist who lived from 1862 to 1931, the park covers 350 acres including the Harmon Tunnel, the nearby ford, and



Harmon Mill
Courtesy of the Madison County Historical Society

The Harmon Mill was the reason the Harmon Tunnel was constructed. Other names for the mill include Backbone Mill and Tunnel Mill. It started as a saw mill and then became a grist mill before it was abandoned in 1904. The mill was removed sometime before the tunnel was first expanded in 1925.

Devil's Backbone limestone ridge formation. Some of the oldest white oak trees in the state are located in the park, including the oldest known living white oak in lowa, which is nearly 400 years old.



Pammel Park ford and dam

The ford allows for vehicular traffic to cross to the west side of Pammel State Park. It was built in the 1920s and provides an area for recreation as well as travel. The ford is closed during high water and under icy conditions. Paddlers should portage around the ford.





Maple sugaring Photo by Roland Reed, c. 1908 (Courtesy of Library of Congress)

Early Euroamerican settlers learned how to harvest and make maple syrup from the Native Americans. A local newspaper reported that the area southwest of Winterset surrounding Harmon Tunnel and Pammel State Park was used by Sauk and Meskwaki groups during the 1830s for its ample sugar maple trees.



Oldest white oak in Iowa Iowa DNR



Electric fence

An electric fence crosses the river and must be navigated carefully, or portaged by paddlers.



Turkey vulture John Wenk



Cliff swallow nests

Stream Reach: Middle River Forest Park to Schildberg Access (11 Miles)

This stretch of the Middle River is a challenging and twisting run through water that is falling fast over mostly limestone rocks and around granite boulders. At this low water level, there are some 26 rock riffles to be run, meaning usually one to three individual rock barriers per riffle. Most, but not all, have at least one deeper water run, allowing skilled paddlers to pass through. Some riffles, however, are so shallow as to require paddlers to "knuckle" or "hand walk" through them or to exit their craft and walk it through. In higher water levels, some would not be as noticeable to a paddler, while new rocky runs would likely emerge. Paddlers need skill in reading the river, assessing whether their skill level is appropriate for a given rock riffle, and good judgment about rocks and other hazards.

Due to recent periods of very high water (in May, 2019, water reached some 10,000 cfs, with normal levels at 200–300 cfs), many downed trees are lodged in the stream and especially in bends in the stream. While these provide valuable in-stream habitat and natural bank protection, they also produce dangerous strainers and sweepers for paddlers at various water and skill levels. Even in low flows, strainers exist in some rock riffles precisely in the location where the water is deep enough to paddle through the riffle. Careful scouting should be done before running any riffle. At this paddling, trees blocked 80–100% of the river in 10 different locations in this river section.

This section is a mostly wild paddle with no human constructions visible except at bridges. The access at Adair Forest Park is well-marked, has adequate parking and turn-around space, and a concrete walk-down ramp. The Schildberg Access has adequate parking and a walk-down ramp, all on the northeast side of the Highway 92 bridge. It is well-signed from the highway.

Low sandstone and limestone bluffs add a fine aesthetic to much of the paddle, as well as providing micro-climates for some specialized plants and animals. Trees are sometimes perched precariously on rock edges, holding tight with roots reaching into rock crevasses. Large granite boulders, ranging in size from basketballs to small cars, are occasional but common in and along the streambed, likely remnants of the Wisconsinan glacier some 12,000 years ago. They were carried into the river by glacial meltwaters and move downstream now very slowly. The sparkles of their feldspar and mica minerals and rounded shapes contrast with the angular edges and overall lack of luster of sandstone and limestone.

Most of the route is forested, with wide areas of bottomland hardwoods of silver maple, box elder, cottonwood and willow that change to upland benches of walnut, hackberry, elm and ash. Bur and some swamp white oaks and even catalpas are also occasionally found on the floodplain. Farther up, white, red, and bur oak and basswood dominate. In a few places, shagbark hickory and, more rarely, buckeye can be found. On one pasture hillside, what appears to be an oak savanna is actually a cottonwood and walnut savanna, the cottonwoods withstanding the relative dryness farther up off the floodplain.

Reeds canary grass and brome are common along much of the shoreline, sometimes on the top of a scoured bank, other times on a well-vegetated, more gently sloped bank on the river's edge. Beaches are common along the inside bends of this winding stretch, composed of rock cobble on the upstream end and sand on the downstream end. Plants typical of disturbance are found backing such beaches: cocklebur, giant ragweed, dock, Reeds canary grass, and common mallow ("cheeses"). In a few instances, dense stands of shrub-sized willows dominate the inner beaches, holding sand, rocks, and soil in place against the relentless water. Due to recent extreme water levels, the shoreline is often scoured and eroded on outside bends, leaving vertical banks of glacial till exposed and vegetation sloughing off into the river. In other areas, riverbank grape and Virginia creeper vines drape gracefully over the shoreline branches and elderberry shrubs have ripening fruit clusters. Tall bellflower blooms blue under the shoreline trees. In some open buffered edges, cup plant, purple coneflower, and other prairie plants are visible.

While most of the shoreline is wooded to some degree, row-crops of corn and soybeans are visible in a few locations along this section. Eroding banks are common where the crop has little vegetated buffer between it and the river. In the last third of the trail, the river passes through a cattle pasture. It becomes obvious by broken down banks and a change in



Limestone bluffs

This water trail travels back in geologic time to over 300 million years ago providing clues to the rise and fall of ancient seas. The most obvious examples along the water trail include limestone seen at the bluffs, as well as shale layers.



Tree clings to cliff top

the dominant vegetation: abundant musk thistles, honey locust, mulberry, and osage orange (a.k.a. "hedge apple" or "monkey brains") trees in the pasture—species that livestock won't eat—and by shallow riffles caused by more siltation in the stream. An electric fence across the river on one or both ends of this $\frac{1}{2} - \frac{3}{4}$ mile long pasture must be navigated carefully by paddlers.

Wildlife in this stretch is typical of river bottom species. Great blue herons stalk fish and frogs in the shallows. Kingfishers wait motionlessly on low-hanging branches for fish to swim close, only to bolt and give their rattling call as a paddler approaches. Rough-winged swallows and dragonflies dart over the water, catching insect prey on the wing. Eastern kingbirds await their chance for insect prey on bare branches of tree snags. Every bridge along the route has hundreds of pottery nests of cliff swallows beneath it. Cowbirds and red-winged blackbirds vie for space along open shoreline. Turkey vultures and the occasional bald eagle ply the winds over the river. Wood duck hens bolt from dense root tangles, leading paddlers downriver and away from their hidden ducklings. Dozens of killdeer and spotted sandpipers march on the beaches in search of prey among the rocks and sand. Yellowthroats, indigo buntings, song sparrows, house wrens, and yellow warblers call from perches along the shoreline. Goldfinches flash their bright colors as they glean insects and seeds from beaches. Red-bellied, redheaded, northern flickers, and downy woodpeckers are heard and seen in woodlands along the way and blue jays warn of a hawk or owl. Rose-breasted grosbeaks eat fruit from shoreline shrubs as eastern towhees call from the woodland and catbirds imitate all that they hear.

Thousands of water striders dance on the water's surface and the delicate black wings of ebony jewelwing damselflies belie their predatory intentions. Monarch butterflies and tiger swallowtails can be found in the more open sections of shoreline.

White-tailed deer are common along this section and can be seen, along with fox squirrels, drinking from the river. Raccoons leave track impressions on nearly every beach. The bank dens of beavers, some hidden under tree roots, others open, tell of their presence, as do chewed willow stems and cut corn stalks.

Recommended experience classification: Advanced

*Due to distance and difficulty in navigating riffles and downed trees, only advanced paddlers should attempt this section.

Stream Reach: Schildberg Access to Roseman Covered Bridge Access (7 Miles)

This section continues to twist and turn through beautiful limestone bluffs, shale layers, mature forests, and some row-crop ground. It passes through at least 28 rock riffles (meaning one to three riffles in a series of rocky areas where the water drops 1–3 feet or more in a short distance) in the seven miles. Some must be navigated in a serpentine fashion, with paddlers moving quickly from one side of the river to the other to run the proper riffle chute. This is definitely not a section for beginners or those unsure about their paddling skills. This is a beautiful but challenging river for paddlers. Due to recent extremely high water, many trees currently provide extra challenge, and caution is advised. Downed trees are often in the middle of a riffle, serving as dangerous strainers. While removal of some may be done, paddlers are cautioned that new strainers and sweepers will likely occur without notice. Please take time to read the river carefully, honestly assess your own skills, and, if you are unsure of your ability to run a riffle safely, get out of your craft and walk it through or portage around it.

Limestone outcrops continue in this section, adding both natural rock sculpture along the route and places for lichens, mosses, and ferns to grow. At times they appear for only a few yards along the river edge, rising just a few feet above the water; at others, they line a shoreline for a hundred yards and stretch upwards 20–40 feet. Shale layers become visible in some outcrops, especially in the lower half of this river section. Where surface limestone is absent, glacial till is exposed, sometimes recently by scouring floods, revealing the layers of silt, sand, and rocks left behind in ancient glacial periods. Though south of the Des Moines Lobe and, therefore, not touched by the last glacial advance, the Middle River was affected by the roiling meltwaters of the glacier that left the region about 14,000 years ago.



Glacial erratic Iowa DNR

Called erratics because they seem out of place in the existing landscape, these large granitic boulders traveled from Canada on glaciers. This erratic was deposited more than 500,000 years ago in what is known as the pre-illinoian glacial stage. They can be large enough to pose a hazard to the inattentive paddler.



Blue Lobelia
Photo by Jim Liechty



Northern water snake basking on a tree trunk.

Slow and quiet paddlers can get quite close for a look at a beautiful snake, but touching is ill-advised: this species, though not poisonous, will bite if bothered. Those waters carried granite boulders south from the end moraine of the glacier and left them deposited randomly in the riverbed, today creating interesting glacial erratics in and along the river.

Beaches of sand and rock occupy the inside bends of the river and mid-river sandbars are common above rock riffles, accumulating there as the water slows above the riffle, often to halt the progress of the unsuspecting paddler mid-stream.

Some scoured banks are covered with waste concrete pieces, attempts to arm the bank and prevent erosion. Too often, however, such dumping is useless and the river removes them in spring or summer run-off. Fortunately, such concrete and brick rip-rap is rare in this section. In a few areas, fencing, metal bridge framing, and other human artifacts may be found revealed by strong currents. But this is a mostly wild section, with only a couple of cabins, one bridge, and short sections of cropland visible to remind us that this is human-settled land in Central lowa.

The shoreline is often tree-covered, with bottomland hardwoods of silver maples, cottonwoods, box elders and willows. Walnuts, elms, ashes, a few honey locusts, hackberries, and some bur oaks occupy the slopes or benches a few feet higher. Shagbark hickories, white and bur oaks, basswoods, more walnuts, and even the occasional buckeye are farther up the slope, often topping the limestone outcrops, and red oaks can be found on north-facing, somewhat cooler, slopes along the river. In areas, black maples can be found mixed with basswoods, both shade-tolerant species. Ironwoods are often in the subcanopy and understory shrubs of elderberry, ninebark, indigo bush, and dogwood are present, especially along the river edge where they can get a bit more sunlight. Just as notable, however, is what is NOT found in the shrub layer: non-native bush honeysuckle appears to be a rarity in the woodlands along the Middle River.

Where shorelines are open but vegetated, Reeds canary and brome grass dominate the banks, often accompanied by pioneer species of forbs like ragweed, dock, cocklebur, mallow, parsnip, and cannabis. Horsetail (*Equisetum*) can be seen in a few dense stands along the river, often signaling a wet run-off area from a pasture. In a few sections, prairie species are present, including some big bluestem and Indiangrass, cup plant, goldenrod, bergamot, and coneflowers. Where cropland is close to the river, beavers have often harvested stalks and added them to their winter stores in the river.

Wildlife spotting continues to be good for paddlers. Be on the lookout for great blue herons, belted kingfishers, and wood ducks along the shore. Killdeers run the beaches and sandpipers dance on the rocks and downed trees, both in search of small invertebrates to gobble. Swallows fly low over the water, grabbing a drink or small insects, and nest under bridges and in the banks. Dead trees provide apartment houses for woodpeckers along the shore and catbirds, yellowthroats, song sparrows, blue jays, and yellow warblers can be heard calling along the shoreline. Eastern kingbirds, eastern phoebes, and cedar waxwings perch on overhanging branches, awaiting unsuspecting insect prey to fly by. Deer come to the river's edge to drink and the tracks of raccoons in the mud reveal their previous night's exploits. Mussels seem to be largely missing from the river, so the raccoons must be preying on crayfish and other aquatic critters. Some turtles can be found basking in the afternoon sun but quickly slip into the water and disappear. Northern water snakes, however, are more fearless, soaking up sun on logs or overhanging limbs. Slow and quiet paddlers can get quite close for a look at a beautiful snake, but touching is ill-advised: this species will

bite readily and, though not poisonous, can be painful. The deep tones of an occasional male bullfrog can be heard from the warm shallows on a summer afternoon.

Both the Schildberg and the Roseman Bridge Accesses are well-marked from nearby roads, have adequate parking areas, water trail signage, and good walk-down access trails. All bridges on the route are well-signed and visible to paddlers and access signs are readily visible from the river.

Recommended experience classification: Intermediate







Boat Ramp



Carry Down Access



Restrooms



Water



Shelter



Camping







Information

Point of Interest



Paddlers Be Aware:

- Electric fence crosses the river. Please use extreme caution.

Note: Access numbers correspond to the distance in river miles calculated from the mouth, then rounded up. To figure the approximate distance between two accesses, subtract the lower access number from the higher access number.

0 MILES 2

Clark Tower

The Clark Tower was constructed in 1926 as a memorial to the first pioneer family in Madison County. It is located in Winterset City Park and stands 25-ft tall with a commanding view of the river.

Tower view



Shale layers along the water trail lowa DNR

Look for the dramatic limestone bluffs and shale layers along the water trail between Schildberg and Pammel Park Ford accesses. **Stream Reach**: Roseman Covered Bridge Access to Pammel Park Ford (8.7 Miles)

This section is one of the most scenic on the entire Middle River, offering up limestone cliffs, dense woodlands, and grasslands. It also offers some challenging paddling, with at least 23 sets of riffles (usually 2 or 3 runs in a given riffle set). At low water levels, paddlers may experience the need to "knuckle through" or walk some riffles. At higher water

levels, many of these riffles will disappear but some may prove even more challenging. Newly fallen trees may result in a hazardous strainer mid-riffle or necessitate a short portage. As a result, scouting a given riffle set is advised at any water level.

The limestone outcrops and shale layers present in the previous section become even more dramatic in this river section. Some outcrops rise 40 feet or more above the river. Granitic glacial erratics, their feldspar and mica components often glistening in the sun, are common mid-river, providing eddies for insect nymphs and fish on their downstream sides. In some portions, the banks of the river are steep and scoured, exposing the till soils. The bottom is rocky in many locations, but the sand and silt often accumulate above riffles where the water slows down and drops its sandy load, often creating mid-river sandbars to surprise paddlers.

A woodland buffer is the norm for this river stretch, usually on both sides of the river, though row-crops may be visible just beyond the trees in some

sections. In the lowlands, silver maples and small groves of cottonwoods predominate, with willow, box elder and a few other species adding some diversity. On the benches and slopes up from the river, walnuts, and bur, white, and (on west- and north-facing slopes) red oaks are found, along with basswoods, black maples, and shagbark hickories. Chinkapin oaks, a member of the white oak group, are also seen along this section, a population somewhat disjunct from its normal range in the Des Moines River valley. Some old red cedars cling to the edges of the tops of limestone bluffs. In at least one location, trembling aspens are found, whether planted or natural in occurrence. A few honey locust and even some black locusts are also found near pastured areas.

Ironwood is common in the subcanopy and elderberry, serviceberry, and indigo bush (found only in areas of limestone) can be seen in some of the shrub layer of the understory. In some open areas, Reeds canary grass and brome grass are common, with patches of native *Carex*, a large sedge, found near the water. One area near the Roseman Covered Bridge contained a patch of invasive pampas grass, likely an escapee from a nearby garden. On one slope visible from the river, a planting of pollinator plants glowed with ribbons of lavender, pink and yellow, as blooms of bergamot, purple coneflower, and grey-headed coneflower were on full display.

Bottomland hardwoods like silver maple, cottonwood, willow, sycamore, and box elder are all fast-growing, "soft" hardwoods common along lowa rivers. That is, their fast growth makes for heartwood that is less dense than that of oaks, hickories, and maples that grow farther up-slope. That's an important characteristic for many species of wildlife. Softer wood decays more quickly and these bottomland species provide cavities in the trunks for numerous bird, mammal, and insect species. Large specimens of cottonwood and sycamore are often home to our national symbol, as bald eagles build nests in their upper branches. In addition, these hardwoods produce seeds by the millions, useful for quickly populating beaches and mudflats and quickly establishing new populations. But those seeds are also food for many of the wildlife species that occupy our river corridors. Though "soft", these hardwoods are critical members of the riverine communities.

Many wildlife species continue to take advantage of the habitat the Middle River provides. Although it is difficult to watch for wildlife while running so many rock riffles, lots of critters are found along the Middle River. Bald eagles can be seen (though no nests are obvious), often fishing the rock riffles for food. Great blue herons find the quiet water above the riffles more productive for their food-search. Cliff swallows utilize the concrete portions of the three bridges that cross the river in this section, attaching their clay pottery nests to



Scoured river bank



Tree strainers mid-riffle



Cottonwood savanna

the undersides of the concrete to protect them from rain. Catbirds glean insects from the limestone cliffs and cardinals and rose-breasted grosbeaks gather seeds and berries from the abundance available in the riverine woodlands. Blue jays "JAY!" from the woods, warning of an owl or hawk nearby, and crows often respond.

Killdeer use the beaches and the few pastures found along the river, both for nesting and for gathering insects. Chipping sparrows join them in the pasture areas, gobbling weed seeds found there. Eastern phoebes and cedar waxwings wait on branches, darting out and grabbing passing insects. Paddlers are highly likely to see white-tailed deer along the river also, since they are numerous in this area. And beavers occupy bank dens hidden beneath the root masses of trees and grasses.

Both the Roseman Bridge and Pammel Park Ford Accesses are well-signed and have sufficient parking areas and good walk-down ramps. The Ford can be accessed from either side of the river, though paddlers going on to the other Pammel Park Access #61 should portage on river left around the concrete dam/ford as the re-entry is much easier on that side. Signs are visible and accurate on all three bridges of this section, very helpful to paddlers in knowing the distance to the next bridge and/or access.

Recommended experience classification: Intermediate

Stream Reach: Pammel Park Ford to Pammel Park Ford East to Middle River County Park (9 Miles)

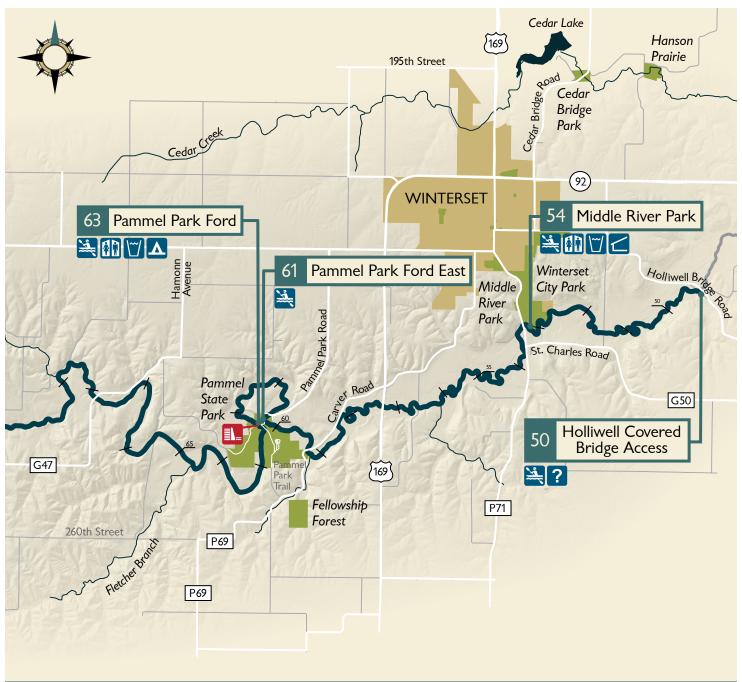
This section is really two: a short two miles that is a large horseshoe bend north and then back south to the park (Access 61 is on the east side of "the tunnel") and a seven-mile portion that ends at Middle River Park, the Madison CCB headquarters. As a whole, this stretch becomes quite different from the upper portions of the river.

The two miles in the horseshoe bend around the park includes at least ten rock riffles, some limestone outcrops and low bluffs, some prairie, and an outside bend in the river that includes lowland and upland woodlands. The inside of the bend becomes increasingly open, eventually yielding to a floodplain rowcrop of corn next to the river. Anglers take advantage of several of the beaches in this big bend, as do several of the usual wildlife suspects: herons, kingfishers, killdeer, and sandpipers.

Some large cottonwoods, elms, a few silver maples, willows, and sycamores grace the areas nearest the river. Reeds canary, some cordgrass, sedges, and brome grass line many of the river shorelines. Big bluestem grass, mountain mint, bergamot, and coneflowers reveal a prairie planting in a floodplain piece of private land. On uplands farther up-slope, oaks, basswoods, and some black maples are visible from the river. On the inside floodplain, cottonwoods, willows, some honey locusts, and even invasive Siberian elms give way eventually to weedy annuals like giant ragweed, mallow, and cocklebur, and then corn planted to the river's edge. Not surprisingly, a number of dead trees are in the channel, some blocking passage of paddlers through the many riffles.

Beyond the "usual suspects", dickcissels, yellowthroats, and song sparrows sing from the prairie planting. Woodpeckers make use of the dead elm snags in the floodplain and phoebes and kingbirds perch in their bare branches, waiting for unsuspecting insects to fly close. Indigo buntings call from the wooded shoreline and goldfinches get seeds and moisture from the beaches. Mussel shells continue to be conspicuous by their complete absence.

As the river moves eastward from Pammel Park access, the landscape looses the dramatic bluffs and mostly wooded buffer of upstream river sections. The land next to the river is more likely to contain agricultural rowcrops than earlier sections. The next seven miles contain at least 16 riffle series (usually 2 or 3 runs per riffle) and many dead trees in the water, collected especially at bends in the river and on the pylons of the four bridges that cross the river in this stretch. Paddlers are advised to carefully scout a riffle for strainers







Beginner Level

Intermediate Level

Advanced Level

City/Town



Public Land

Paved Roadways Gravel Roadways

County Line



Boat Ramp



Carry Down Access



Restrooms



Water



Shelter



Camping



Dam 🕺



Information

Point of Interest



Paddlers Be Aware:

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Buffalo Mills and Village Andreas Atlas (1875) for Madison County

The first sawmill in Madison County was built in 1848 by A. J. Hart and Emanuel Hinkle just south of Winterset on the east side of the river. As the area expanded, it became known as Buffalo Mills. The village of Buffalo, which eventually housed about 30 families, sprang up around the early mills and included a blacksmith shop, brickyard, general store, wood shop, and wool carding facility. When the mills died, so did the village, and little evidence of its existence remains. The village location is now considered an archaeological site.



Riffles and rapids

The river is riddled with rocky riffles and rapids. Some rapids have one- to three-foot drops, and some riffles are so shallow that paddlers may need to "hand walk" or get out and drag their boats through them during low water conditions.

before attempting to run it. There is no shame in walking and floating or dragging your watercraft through an area!

Sycamores and cottonwoods, some quite large, continue to be floodplain woodland members, as do willows, box elders, and some silver maples. Hard maples, some ash, oaks, walnuts, and basswoods can be seen in some areas on adjacent uplands. Some prairie plantings are visible in a few areas, especially the popular pollinator plantings.

With much of the floodplain occupied by rowcrops, many very close to the river's edge, there is low clarity and a high amount of sediment in the river. Many areas, especially in low flow times of the summer, are silted in and the river's thalweg is fickle and difficult to find. Mid-river sandbars, on the other hand, are easy to find and strand the paddler, resulting in mid-river slogs. In several places, the river is still making up its mind about where to flow, creating side-channels and muddy backwaters.

The predominance of rowcrops on the floodplain, together with heavy rains, contribute to a flashy river and many trees and logs in the river, sometimes totally blocking the river and rock riffles, and other times creating "deadfall gardens" of logs which paddlers must carefully pick their way through. With little buffer, scoured banks of till are common and, as a result, this stretch has many more banks armored with waste concrete, much of it often missing and ending up creating riffles downriver.

All in all, it is not as pretty or pleasant a paddle as earlier stretches of this river.

Wildlife species still use this stretch, though, many adapting to the changes. Cliff swallows build their clay nests beneath every bridge in this section, sometimes numbering hundreds of nests. Redheaded woodpeckers, traditionally a savanna species, use the openness for foraging and nesting, the scant woods mimicking their savanna homeland. Great blue herons favor the many riffles for fishing, and green herons find a few shady shallows that they can hang over and hunt. Water snakes make use of the abundant trees in the water to bask above water and find fish beneath water. Coyotes, now common in lowa but seldom seen, can be found along the river. One was seen lying down on a beach for a nap, full of freshly eaten deer fawn, oblivious to an approaching paddler but keeping an eye on his remaining meal. They adapt well to human-dominated landscapes. Red-winged blackbirds and killdeer are easily seen in this river stretch, adapting well to the more agricultural nature of the land.

The two accesses in Pammel Park are well-marked and well-maintained. The trail down to the river at Pammel Park Ford East access is a bit rough, likely due primarily to recent high water. The access at Middle River Park needs repair to the concrete ramp, also likely damaged by recent high waters. Paddlers are advised to take out just above or below the ramp to avoid concrete pieces.

Recommended experience classification: Intermediate

Stream Reach: Middle River Park to Holliwell Covered Bridge Access (4 Miles)

This four-mile stretch of the Middle River in Madison County might be suitable for beginners, except that there are too many trees and strainers to navigate at this time. It is more wooded along the shoreline than the previous seven miles, has fun riffles (if the strainers were removed) and, despite its proximity to the town of Winterset, has a fairly wild feel to it, with a variety of wildlife species to be seen and heard.

The bottomlands are full of large cottonwoods and silver maples, with some willows and box elders. Uplands have basswoods, oaks, some black maples and ashes. Some elderberries are found along the river's edge and Reeds canary, brome and other grasses are found along the river's perimeter.

Mussel shells do not appear to be present in this stretch, but many terrestrial species are here, including deer and raccoons, herons, kingfishers, bald eagles, and a large number of great blue herons. Family flocks of killdeers roam the beaches in mid-summer. Orioles, cardinals, blue jays, flickers and other woodpeckers, and indigo buntings can all be seen and heard in the woodlands along the route.



Doe climbs the river bank

The high sedimentation rates in the previous section mean that much of this section is also shallow, with a sand bottom leaving only a few inches of paddleable water in some stretches. An industrial site of some kind blurs the view in the first mile or so of this route, but the remainder of the section is a change from the previous highly agricultural section.

The access at Holliwell Covered Bridge is well-marked and maintained on river left just past the bridge. The walk-down trail is easily found and there are several interesting historical interpretive signs about the bridge and the area.

Recommended experience classification: Intermediate

Photography: All photographs are attributed to Jim and Cindy Pease unless otherwise noted.

BE SAFE OUT THERE!

Follow these safety TIPS to keep your trip enjoyable:

- Pack only essentials and keep them in waterproof bags.
- Check the river water levels and currents before each trip.
- Know the weather forecast, including areas upstream, and stay aware of the weather on your trip.
- Make sure someone knows your planned entry and exit points and estimated times.
- Always wear a properly-fit life jacket.
- Expect overhanging trees, logjams, and other obstacles, such as bridge abutments or big rocks. If paddling around them is not possible, get out and portage around them. Grabbing onto tree branches may capsize your paddlecraft.
- Always portage around lowhead dams.
 Surface appearance can be deceiving.
 Undercurrents can be strong enough for drowning.
- If you capsize, remain on the upstream side of your boat to prevent being pinned.
- Dress appropriately for weather conditions (including air and water temperatures), and avoid weather and water conditions beyond your skill level.

KNOW YOUR SKILL LEVEL!

- **BEGINNER:** Segments are generally less than six miles. Hazards are few and easy to avoid in normally slow-moving currents. Users can easily access these segments from parking areas, and will not need to portage, except to walk a boat around some shallow riffles or to make going around an obstacle easier.
- INTERMEDIATE: Segments are generally less than nine miles. Users should be able to recognize and avoid hazards in moderate river flow. The need to portage is rare, but users should be able and willing to carry boats and gear a short distance. Access to the river may involve a short portage, and the launch or take-out may be a bit difficult.
- ADVANCED: Segments may exceed nine miles. Hazards are likely and often occur in fast-moving water. The need to portage may be frequent or may involve carrying boats and gear a long distance. Access to the river may involve a portage, and the launch or take-out may be from steeper banks or faster moving water.

BEHAVE AS A GUEST!

- Respect private property. Only use public lands and access points.
- Be considerate of others in your group and on the banks.
- Give anglers a wide berth.
- Never change clothes in public view.
- Never litter. Always pack out trash.
- Do not disturb wildlife.

For more information, visit:

www.iowadnr.gov/Things-to-Do/Canoeing-Kayaking/How-to-Paddle

Madison County Conservation Board

515-462-3536 www.madisoncountyparks.org

Madison County Area Tourism 515-462-1185

Paddle, Pedal, & More 319-592-3220

