

## RIVERS OF CONTRAST

The Middle and South Raccoon Rivers are two dissimilar rivers with similar names. The Middle Raccoon is defined by its wildness – protected lands bordering a river mostly absent of human development. The wildness of the Middle Raccoon is so unique that the State of Iowa has designated it as one of only five Protected Water Areas in Iowa. The South Raccoon is defined by the working landscape of cropland that is often visible from the river, and which impacts the look and wildlife of the river's water and the experience of its paddlers.



Sandstone and shale walls show the sediment layers of a shallow sea that covered all of lowa millions of years ago. Sea currents left diagonal designs in sandstones called crossbedding. Pieces of soft coal may be found on sandbars.

The South and Middle Raccon Rivers are navigable "non-meandered" stream in lowa. That means that the State of lowa owns the water flowing through it, but not the land adjacent to it or under it. Except at access sites and public areas marked on the map, the land adjacent to and underneath the river is private. Please respect it and do not trespass.





Working landscape along South Raccoon



Forested lands along Middle Raccoon



Along the Middle Raccoon, predators take advantage of a clean river with abundant habitat. Bald eagles, great blue herons, green herons, and kingfishers are seen snatching fish and other prey. Raccoons and river otters dine on fish, mussels, and crayfish. Songbirds, such as swallows, phoebes, pewees, cedar waxwings, and eastern kingbirds, grab insects from the air.



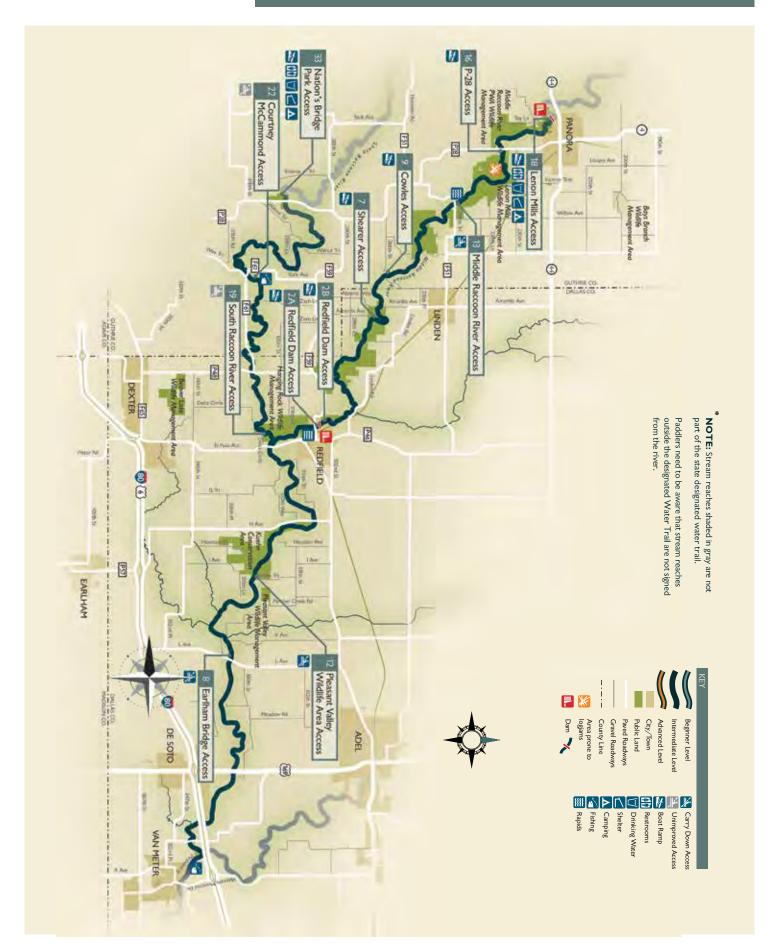
Turkey vultures are a common sight soaring on thermal updrafts. They may be mistaken for bald eagles, but have a smaller head, fly with wings raised in a shallow "V", and teeter as they soar. Their keen sense of smell detects mercaptan gas given off by dead carcasses.



The Middle Raccoon River dumps into the South Raccoon below the town of Redfield. The Middle Raccoon journeys through a corridor dominated by forest and publicly protected land. Its clear water provides stark contrast to the brown, turbid water of the South Raccoon, which has passed through a mostly agricultural landscape prone to soil erosion. The different densities of silt cause the waters to flow side-by-side for more than a hundred yards before mixing blurs their origins.



The Middle Raccoon River is uniquely beautiful. Land on one or both sides of the river are protected in public domain to retain wildness. Rocky riffles, sandstone and shale bluffs, and dense forests set a picturesque scene. Wide, treed buffers and fenced pastures protect the water from sediment, resulting in clearer waters than usually experienced in lowa rivers of this size.



#### MIDDLE RACCOON RIVER

## Lenon Mill Park Access to P-28 Access to Middle Raccoon River Access to Cowles Access – 9 miles

This section is an incredibly beautiful paddle, with public lands on one or both sides of the river. The Middle Raccoon, from Panora to Redfield, is one of only five lowa rivers designated as a "Protected Water Area", recognizing its uniqueness in retaining its natural, wild features. Abundant rock riffles, sandstone and shale bluffs, and dense forest uplands are defining features of the river. Where agricultural fields approach the river, the treed buffer is usually wide and pastures are fenced, preventing livestock from entering the river.

Sandstone and shale bluffs rise from 4 to 40 feet above the river. These landforms date to the Carboniferous Age, from 323 to 303 million years ago. Cross-bedding in the sandstones and some narrow coal layers are the result of shifting currents and depths of the inland seas in which these layers were formed. Pieces of coal formed in that period are occasionally found on some beaches.

Rock and glacial till, brought into the river from tributary streams, form riffles in the river. Granite boulders are also a feature of the river, having been deposited by glacial melt-waters more than 10,000 years ago. Boulders, and large blocks of sandstone from adjacent bluffs, are occasional obstacles for paddlers.

Abundant river and forest habitat attracts a variety of wildlife. Birds that make a living by fishing are commonly seen along the route. Bald eagles, great blue herons, green herons, and kingfishers are nearly everywhere along the route. Turkey vultures and crows pick at the remains of other animals' catches on shoreline beaches and rock bars. Insect-eating songbirds also are seen nearly constantly. Cliff swallows, rough-winged swallows, bank swallows, barn swallows, phoebes, pewees, cedar waxwings, and Eastern kingbirds catch insects on the wing. During a typical late spring trip, paddlers hear songs of rose-breasted grosbeaks, robins, wrens, scarlet tanagers, blue jays, catbirds, Baltimore orioles, and indigo buntings. Red-headed, red-bellied, and downy woodpeckers drum on dead trees. Red-tailed and broad-winged hawks are seen and heard along the river's wooded shoreline. Killdeers and spotted sandpipers run on the beaches. White-tailed deer and fox squirrels prowl the shoreline woodlands. Beavers make their presence known with willows and other trees felled along the shoreline and dens exposed in the banks. Turtles are seen basking on beaches and on logs in the water.

Mussels make use of the well-aerated water and its apparently good plankton population. Shells of at least six different species are found: fragile papershell, black sandshell, mapleleaf, washboard, fat mucket, and plain pocketbook. Raccoons and otters harvest many of those mussels, leaving shells behind on the water's edge.

Paddlers are encouraged to scout the water carefully for riffles, some of which have tree sweepers mid-riffle that can be dangerous. For experienced paddlers, the riffles may offer excitement and occasional challenge. In one location below the P28 Access, constructed rock wing dams attempt to divert current to prevent shoreline erosion. These structures sometimes succeed in their goal, but also may create erosion problems downstream.

Short distances between accesses are an important feature of this river, allowing for many trip options for paddlers. Lenon Mill Park has a cement ramp access below the dam. The P28 Access is just below a bridge that is teeming with cliff swallow



Bluffs topped by oaks and other hardwoods.



Sandstone and shale break down to form mud. Cliff swallows somehow pick out the perfect mud for building their pottery-like nests that often are found plastered beneath bridges.



nests. The ramp is perpendicular to the river, but rocks placed just above the ramp provide a nice eddy for paddlers and boaters. The 248th St. Bridge provides a walk-down access on the left side of the river, just above a riffle beneath the bridge. The Cowles Access is a cement ramp on the right side of the river, just above the 268th St. Bridge. Only Lenon Mill Park has restroom facilities, camping, and drinkable water availability.

While the distances between accesses are appropriate for beginners, frequent riffles and presence of sweepers make this stretch of river appropriate for paddlers with at least intermediate or experienced skill levels.

# Cowles Access to Shearer Access to Redfield Dam Upper Access – 7.8 miles

As in the previous section, this last section of the state-designated Middle Raccoon River Protected Water Area presents exceptional beauty and challenges. Publicly owned land is on one or both sides of the river for about two-thirds of this section. Water flows relatively clear, and the river bottom is mostly sand and gravel. Most of the land is heavily wooded, though at times the treed buffer is rather narrow. In one place, crops are planted to the very edge of the riverbank, which is eroding with the crop falling into the river. Relatively few homes or cabins are seen along the river.

Silver maples, box elders, cottonwoods, and willows occupy much of the bottomland forest. Uplands are dominated by mixed oaks, some growing quite large. Red cedars grow on the edges of dry rocky bluffs.

Numerous rock riffles provide challenge and fun to paddlers. Several have tree strainers, also known as sweepers, which can trap or overturn a boat. Scouting these riffles is recommended. Depending on water levels, paddlers may encounter places where trees block 75 percent or more of the river. Several sharp river bends also contain significant logs, and can present hazards to paddlers who get too close, especially at higher water flow.

Fallen sandstone blocks and glacial till brought into the river by intersecting streams provide a "natural rip-rap" for the shoreline, protecting the soils there. A few large glacial boulders mid-river tell of the power of water and ice.

Wildlife species mentioned in the previous section continue to use the river and wooded corridor. Turkey vultures are a nearly constant presence, especially when air currents are rising on a warm, sunny day.

The Cowles Access, Shearer Access and the access above Redfield Dam provide cement boat ramps.

While distances between accesses are appropriate for beginners, frequent riffles with occasional sweepers make this stretch appropriate for paddlers with at least intermediate skill level.

# Redfield Dam Lower Access to confluence with South Raccoon to Pleasant Valley Wildlife Area to Earlham Bridge Access - 12.2 miles

This stretch begins on the Middle Raccoon River at the access just below the Redfield Dam, about 1.7 miles above the confluence with the South Raccoon River. Paddlers will float through some of the most beautiful portions of either river.

The sculpted, sandstone bluffs of Hanging Rock County Park rise 30 to 40 feet



Old bur oak atop ancient sandstone.



Severely eroded banks are visible along the South Raccoon riverbank in places. Shallow-rooted corn and soybeans are unable to hold ground against the eroding force of water. The farmland tears away, dumping soil into the river.



Dramatic, sculpted sandstone bluffs rise 30-40 feet above the water at Hanging Rock County Park. Exposed layers of sandstone often are laced with colored minerals.



Collapsing bluffs create new habitat.

out of the river. The bluffs were carved by meltwaters of the last glacier to retreat from lowa, and more recently by floodwaters of the Middle Raccoon River. Exposed are layers of sandstone of various thicknesses, often laced with colored minerals. Sandstone cliffs continue to be an occasional visual treat in the remainder of this section, but nowhere are they as dramatic.

Where the Middle Raccoon empties into the South Raccoon, the change in water quality and clarity is dramatic. The Middle Raccoon flows out of an area largely dominated by woodlands and mostly protected as public land. Its waters are relatively clear, sometimes with a green tint. The South Raccoon flows through a mostly agricultural landscape, with few buffers wide enough to filter runoff and protect against erosion. It flows muddy, with no visibility at all. Due to the

differences in sediment load, water from the two rivers flows side-by-side for more than one hundred yards before significant mixing blurs their joining.

The remaining 10.5 miles to Earlham Bridge contain a large number of scenic rock riffles. All of the land along the river is in private ownership, except for approximately three miles of Pleasant Valley Wildlife Area and the Kuehn Conservation Area. Although some private lands along the river are row-cropped, much of the shoreline is heavily wooded in both bottomland and upland hardwood trees.

Collapsing bluffs along this stretch create fresh habitats for plants and animals to exploit. Newly exposed rock provides a surface for lichens, mosses, and ferns to establish. Rock piles provide hiding places for small mammals, dens for snakes, and nesting crannies for birds. Newly fallen rocks in the water provide surfaces for caddisflies and other invertebrates to colonize. Small fish find hiding places to escape river currents and the jaws of larger fish or turtles.

Bald eagles are commonly seen in this section, as are many of the other birds mentioned in the previous section. Kingfishers, catbirds, orioles, and blue jays call from the shoreline. Phoebes glue their moss nests to tiny nobs on overhanging rock cliffs, and cliff swallows glue their nests to the cement undersides of bridges that cross the river. These birds, along with dragonflies and damselflies, catch insects on the wing. A few turtles can be seen basking on the ends of sandbars.

The walk-down ramps at both the Redfield Dam and Pleasant Valley provide ample parking. The access at Earlham Bridge is about 100 yards upstream of the bridge. It has a dirt road leading to it, but the access is vertical, rocky, and not very accessible for paddlers. Most paddlers use an area on the southwest corner of the bridge, taking out on the rock bar below, and climbing the steep 10-foot section of trail to a grass landing. It is not the marked access, but it is the one that is used.

Due to its length and the number of rock riffles, this section is appropriate for paddlers with at least an intermediate to advanced skill level.

## **SOUTH RACCOON RIVER**

# South Raccoon River from Nation's Bridge Access to South Raccoon River Access (14.5 miles) to Earlham Bridge Access (another 11 miles)

This section takes paddlers through a rolling, rural landscape. Much of the surrounding land is agricultural. Still, sandstone and shale cliffs and ample wildlife provide interesting views and natural beauty.

The river has numerous small rock riffles. Most are less than 50 yards long, but several have logs hidden just beneath the surface, and "sweeper trees" mid-river that can snag a passing kayak or canoe. At higher river levels, many of these riffles are further submerged, and likely will be unnoticed. At lower water levels, some

will require paddlers to walk their boats through, or portage around, the riffles.

Sandstone and shale bluffs are common along the shoreline. Some fascinating sandstone bluffs have sponge-like holes. These sandstone and shale layers all originate from sediments in a shallow sea that was here some 323 to 303 million years ago. Some coal, formed from ancient wetland forests on the edge of that sea, can still be found on a few beaches. Large boulders were deposited in the river during the much more recent time of continental glaciers (about 12,000 years ago).

Wildlife is common along this section of river. Great blue herons are commonly seen searching for fish and other prey. Cliff swallows build pottery nests on the cement supports of the five bridges in this section. Bank and rough-winged swallows dig nests

into vertical banks of exposed soil. Killdeers and solitary sandpipers run on the sandbars and beaches. Song sparrows, gold finches, yellow warblers, and common yellowthroats sing from willows that grow on the backside of sand beaches.

Wooded areas along the river provide habitat for a variety of birds. House wrens, indigo buntings, rose-breasted grosbeaks, orioles, Eastern towhees, yellow-billed cuckoos, blue jays, robins, and cardinals are among the various birds to be heard and seen by paddlers. Red-bellied and downy woodpeckers and Northern flickers make use of the numerous dead trees along the shoreline. Great horned and barred owls often flush from bank locations.

Nations Bridge Park contains a good walk-down access, situated between riffles. The park offers camping, restrooms, showers, and potable water. The South Raccoon River Access (#19) is difficult to see from the river, but located at the east end of the sandbar off Delta Circle Road. Beyond the South Raccoon River Access, paddlers will pass by the confluence of the South Raccoon with the Middle Raccoon River, and proceed downriver another 7 miles to the Pleasant Valley Wildlife Area Access and then another 4 miles to the Earlham Bridge Access. The description for this stretch is discussed in the following section.

Due to its length, and large number of riffles and fallen logs in the river, and difficult accesses, this stretch is appropriate for paddlers with at least an intermediate skill level.



Sandstone bluffs, South Raccoon River.

Belted kingfisher



Above the Earlham Bridge, look for what resemble huge dinosaur eggs. These curiosities were formed by mineral collections, called *concretions*, within the layers of sandstone. As the softer layers around them eroded away, the harder "boulders" remained.

# Confluence of the South Raccoon River with the Middle Raccoon River to Pleasant Valley Wildlife Area to Earlham Bridge Access – I I miles

Where the Middle Raccoon empties into the South Raccoon, the change in water quality and clarity is dramatic. The Middle Raccoon flows out of an area largely dominated by woodlands and mostly protected as public land. Its waters are relatively clear, sometimes with a green tint. The South Raccoon flows through a mostly agricultural landscape, with few buffers wide enough to filter runoff and protect against erosion. It flows muddy, with no visibility at all. Due to the differences in sediment load, water from the two rivers flows side-by-side for more than one hundred yards before significant mixing blurs their joining.

The remaining 11 miles to Earlham Bridge contain a large number of scenic rock riffles. All of the land along the river is in private ownership, except for approximately three miles of Pleasant Valley Wildlife Area and the Kuehn Conservation Area. Although some private lands along the river are row-cropped, much of the shoreline is heavily

wooded in both bottomland and upland hardwood trees.

In one section, curious, rounded, sandstone "boulders" seem to grow out of the shoreline bluffs. These are wonderful examples of mineral concretions, formed by mineral collection points within the layers of sandstone. The concretions are hard and therefore more resistant to weathering. The softer layers around them wear away, leaving behind boulders with an appearance like huge dinosaur eggs.

Collapsing bluffs along this stretch create fresh habitats for plants and animals to exploit. Newly exposed rock provides a surface for lichens, mosses, and ferns to establish. Rock piles provide hiding places for small mammals, dens for snakes, and nesting crannies for birds. Newly fallen rocks in the water provide surfaces for caddisflies and other invertebrates to colonize. Small fish find hiding places to escape river currents and the jaws of larger fish or turtles.

Bald eagles are commonly seen in this section, as are many of the other birds mentioned in the previous section. Kingfishers, catbirds, orioles, and blue jays call from the shoreline. Phoebes glue their moss nests to tiny nobs on overhanging rock cliffs, and cliff swallows glue their nests to the cement undersides of bridges that cross the river. These birds, along with dragonflies and damselflies, catch insects on the wing. A few turtles can be seen basking on the ends of sandbars.

The walk-down ramp at Pleasant Valley provides ample parking. The access at Earlham Bridge is about 100 yards upstream of the bridge. It has a dirt road leading to it, but the access is vertical, rocky, and not very accessible for paddlers. Most paddlers use an area on the southwest corner of the bridge, taking out on the rock bar below, and climbing the steep 10-foot section of trail to a grass landing. It is not the marked access, but it is the one that is used.

Due to its length and the number of rock riffles, this section is appropriate for paddlers with at least an intermediate to advanced skill level.

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

## **BE SAFE OUT THERE!**

Keep your trip enjoyable by following these safety TIPS:

- 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, logiams, 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!**

- 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 the going easier around an obstacle.
- INTERMEDIATE: Segments are generally less than nine miles. Users should have ability 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/paddlingsafety

