



# Echoes from Whitewater

## Canyon:

### An Essay on Jones Co.

#### Landscapes



By JEFF NEKOLA

Rarely is Iowa seen as a place of intrigue. The mystery of the place would seem to have disappeared over a century ago when the last Grizzly, Mountain Lion, and Elk fled to other less confined places. Our landscape, where parallel rows of corn and beans march in all directions to some far battle, would seem to be no more interesting than a well-manicured lawn. This is the Iowa of east and west coast myth, a flat land of ruddy-faced farmers in overalls and seed-corn hats. But, for those who venture off the main roads to stop long enough to examine the place, the mythos of the Iowa landscape soon begins to melt away.

Beneath the surface, almost but not quite beyond view, lies a diverse landscape with many mysteries to be explored. The 7.5 minute topographic maps produced by the U.S. Geological Survey, the bedrock geology maps produced by the Iowa Geological Survey,

or the county soil maps produced by the Soil Conservation Service of the U.S. Department of Agriculture help give insight into mysteries of the Iowa landscape. These maps show places with steep north-facing slopes, with outcrops of unusual rock, or with sand, gravel, limestone, or peat soils which beg to be explored.

For over a decade I have done just that, poking around the unused corners of the Iowa landscape, trying to locate those places beyond human development where nature remains intact. What amazes me is how much I have seen in that time: 22 plants not previously known in Iowa; 21 others which were feared extinct here; over 200 other rare plants, and well over 300 places which are still largely the way they were before Marquette and Joliet set sight on the west bank of the Mississippi.

Why is the Iowa landscape so special and what sorts of places go unnoticed



there? Even though less than five percent of Iowa supports native plant communities (the least amount in the Western Hemisphere), many habitats have survived the last 150 years of European exploitation. In 1987, my friend Dennis Schlicht and I began on a whim to make a list of all the natural habitats in the state: to date the list includes 35 entries. Tallgrass prairie, savanna, pothole marshes, and upland forests were once the most common habitats in the state, covering well over 90 per cent of presettlement Iowa. Owing to their deep, fertile soils, these habitats have been largely converted to agricultural use. Less than one acre of prairie exists for each original eight square miles; at most only 500 acres of savanna exist in the entire state, 95 per cent of all potholes have been drained, while only 13 per cent of original forest cover is extant.

Paradoxically, the other habitats (originally far less common) today constitute a greater percentage of the remaining natural areas in Iowa than their once more common cousins. This is because these remaining natural habitats are characterized by soils which are too wet, dry, rocky, or sterile to be farmed, and have thus not been cultivated. The unusual soils or geologies which created such non-arable places within the cornucopia of the Iowa landscape can often be located using soil or geological maps, and these places constitute a remarkable assemblage of the strange and bizarre.

There are algalic talus slopes, associated with ice caves on steep, north-facing slopes in northeastern Iowa. Even in the heat of August, air bathing the ground on these places rarely exceeds 45°, mimicking conditions prevalent during the last Ice Age. There are sand prairies with actual sand dunes that would make a Bedouin feel at home. There are vernal pools, where sandy soil and a fluctuating water level combine to make a habitat favorable

for plants of the Atlantic Coast. There are also fens, called "mound springs" by many old-timers, where artesian springs have created mounds of peat up to 10 feet tall to form in scattered places across northern Iowa. It is not uncommon to be able to walk on such a mound and to see waves of earth spread out from each step. There are also gravel prairies in the far northwest with real shortgrass prairie, limestone cliffs supporting relict arctic plants and animals, and shale glades littered with fossils and supporting a plant community more reminiscent of Canadian prairies than of the U.S. Midwest.

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**J**ones County is a 24x24 mile square in the eastern bulge of Iowa which was referred to by early writers as Cromwell's Nose. The county was named for George Wallace Jones, a delegate to Congress from the Michigan Territory, Wisconsin Territory, and for 11 years (1848-1859), a U.S. Senator for the new state of Iowa.

The topographic maps and geology of Jones County suggest a richly textured landscape. Three major streams, the Wapsipinicon, South Fork of the Maquoketa, and North Fork of the Maquoketa all dissect the county. In places these water courses, as well as their tributaries (like Buffalo and Farm Creeks), cut deeply into the underlying 425-million-year-old Silurian dolomite, creating hills over 200 feet high. In the last 25 thousand years, the place now called Jones County has passed from ice-age cold when permafrost prevailed, to the lush, temperate land of forest and prairie which greeted the waves of European immigrants only 150 years ago.

Perhaps the first naturalist to visit Jones County was T.H. Macbride, the "father of conservation in Iowa" (to quote another great Iowa conservationist, Bohumil Shimek), who collected



plants there as early as 1895. Later would follow Shimek as well as Albert Coe and E.E. Reed who explored the hilly ground along the Wapsipinicon and South Fork near Anamosa and Monticello. The first summary of the native and naturalized plants of Jones County was written by R.G. Brown in 1949 to complete his masters' thesis at the University of Iowa. Many of the first records of plants from the county can be traced to him. The most recent treatment of the flora of Jones County was prepared by Tom Cooperrider at the University of Iowa, under the direction of the eminent botanist Robert Thorne. In his 1962 thesis, he documented over 830 species of plants from Jones, Jackson and Clinton Counties. In the last 30 years, a few botanists have continued the exploration. These include Paul Christiansen of Cornell College, former State Ecologist Dean Roosa, Terry Frest, then of the University of Iowa, and myself. In the decade since I first found Kalm's Brome, Leadplant, Wild Flax, Wild Quinine and Dwarf Blazingstar on the south-facing limestone glade above Buffalo Creek at Beam's Cabin, I have seen towering bluffs, deep forests, fens, and sand prairies in the hinterlands of Jones County, harboring such exotic plants as Plantain-leaved Sedge, Down Indian Paintbrush, Ground Cedar, Three-birds Orchid, Squirrel Corn, Goldie's Fern and Death Camas.

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I was back in Cedar Rapids last spring for only two weeks, taking a break from the writing of my dissertation at the University of North Carolina. While the reason for this vacation was to hunt morels with my father, I also hoped to spend a few days exploring the countryside for remaining prairies, woods, and wetlands. I brought with me some of the essentials for this exploration —

county soil maps and 7.5 minute topographic maps. In the dark months of winter, as cabin fever crept into my joints, I had pored over these maps and tried to imagine what places like Farm Creek, Clay Mills, or Sawyer's Rock would be like. Before any of these places could be visited, I needed to find transportation. It was thus grand luck when Tim Fay called, wondering if I might be interested in spending a day trekking in Jones County, looking at the out-of-the-way corners of the area. We set aside Tuesday, the 18th of May, for this grand foray.

Since 1993 was a year with almost biblical amounts of rain, I awoke on Tuesday morning relieved to find the sky clear and deep blue. The chill in the morning air seemed the sort which might not completely disappear at mid-day, so I made sure to bring along a sweatshirt, along with the topographic maps and collection bags (recycled zip lock) of my trade. I met with Timothy at 9:30 at his farm near Anamosa, and we departed for our first destination: a fen and adjoining sand prairie along the Wapsi two miles north of Olin.

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Fens have been underappreciated natural habitats in Iowa. Though once considered restricted to the northwest, at least 160 (out of an original 2300) occur in the northeastern one-fourth of Iowa. These remaining fens are a vital reservoir of biological diversity. I have seen 320 plant species on northeastern Iowa fens, 44 per cent of them either rare in the region or state. Fully 18 per cent of the Iowa flora occurs in these sites, even though they cover only .003 per cent of the land surface. In addition, these fens harbor populations of one-half of all Iowa butterfly and one-third of all Iowa land snail species.

Like a number of eastern Iowa fen sites, the Olin fen has long masqueraded under an alias. R.G. Brown first visited the site in 1949, and Tom Cooperrider revisited it in 1956, calling it a "sandy marsh." Unlike true marshes however, this site is covered with a layer of peat, has little or no standing water, and is fed by permanent groundwater seepage. It fits the definition of a fen. I first visited this place in the summer of 1991, while finishing the field work for my dissertation, and located ten rare plants there. Since Cooperrider's time, however, the site has been damaged by the digging of a pond for water fowl, and three of the rare plants he reported could no longer be found. Still, this fen was the largest and best remaining in the county.

We hiked to the fen along a sandy farm lane, crossed a wet ditch, and entered the fen. Now, instead of dry sand, we hop from hummock to hummock in a vain attempt to keep our feet from getting stained by the black, organic rich water just under the surface. In all directions is the lush green of new plant growth and ferns smelling of fresh hay—marsh ferns, sensitive ferns, crested ferns. The ground now is the slightest bit elastic and we bounce as we gingerly work our way across. I look for some of the rare plants I saw here two years

ago, but it is too early in the season for most. I look without success for a nondescript grass-like plant called the Slender Sedge, which had been known only from a single fen near Cedar Falls, and which I have seen only five times in Iowa. I do find the three rare violets which make their home here: the Smooth White Violet, the Lance-leaved Violet, and the Primrose Violet. These are shy plants which hide under the larger ferns and grasses, and which have small white flowers with deep purple veins. This is the only site in the county for these three plants. Both the Lance-leaved and Primrose Violets are typical plants of the Atlantic Coast and only rarely occur in the Midwest. In fact, the Primrose Violet is known only from two other sites in Iowa.

We now walk to the edge of the fen toward the adjoining sand ridge and in a few steps we arrive in desert. Open sand dunes surround us on this ridge and represent perhaps the finest sand prairie remaining in the county. Any rain which falls here rapidly soaks away. So xeric are these soils that the typical lush bluestem of an Iowa prairie has been replaced by scattered clumps of ankle-tall panic grass and sedges. In the bare, open sand we see the rare Deep Green Sedge, endangered in Iowa. This sedge bares its seeds at the ground surface so that ants can carry them away to new homes. We catch a glimpse of a red fox which has dug its den into the side of one of the dunes. I look in vain for another of the rare plants I saw here in 1991—Greene's Rush, another Atlantic Coastal Plain disjunct. As I am deciding that it is too early to see this plant as well, the Olin noon whistle blows. If we are to see other places, we must move on. We leave the dunes, enter the fen, cross the waterway, and hike back across the ancient sands to the car.

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While fens may be underappreciated in Iowa, glades share an even worse fate: they have not even been recognized. Glades are grassland habitats which have little or no soil and rest atop bedrock. Glades have been termed "goat prairies," "hill prairies," and "limestone prairies" by Iowa ecologists, but no survey of these places, or of the plants and animals found on them, ever has been conducted. In the last three years, I have become very interested in these habitats and have started this survey work myself. I have found glades on nearly level ground, and glades associated with all four of Iowa's bedrock types (limestone/dolomite, sandstone, shale, and quartzite), making the other names for these places inadequate. Glades occur throughout northeast Iowa wherever erosion removed the overlying glacial till. The bulk of the 30-odd glades which I have seen occur within 50 miles of the Mississippi and in a triangle roughly defined by Charles City, Mason City, and Ackley along the eastern margin of the Des Moines Lobe.

To the uninitiated, glades may seem just like normal prairie land. But, look again. The deep, rich, black soil is gone, having been replaced by rock pieces ranging from the size of a quarter to that of a small car. Gone, too, is the dense cover of tall grass, replaced by species at most waist-high, and often only knee or ankle tall. Lie on your belly, part the grass, and look more carefully still. The ground will be covered with small plants. This is not the case in normal prairie, where such things are not able to compete with large grasses for sunlight and nutrients. Soil lichens cling to the exposed rock. Clumps of Bird's Foot Violet, Hidden Sedge, Richardson's Sedge, Prairie Turnip, Pasqueflower, Ground Plum, Eyebrow Grass, or the Prairie Moonwort occupy the open, stony ground between the scattered grass tufts. Many of the plants you see on these glades are at

the edge of their range, being more common in the northern Plains. Visiting a glade is in many respects like taking a 300-mile trip to the Loess Hills, or a 600-mile trek to the prairies of North Dakota.

One of the nicest limestone glades in Iowa was located by R.G. Brown in the late 1940s a few miles west of Canton in eastern Jones County. Tom Cooper-rider relocated this site in the late 1950s, and in July of 1987 I was happy to find that it still existed.

The glade is found on a small ridge of Hopkinton Formation dolomite near an abandoned quarry. We parked our car at the quarry, and walked up an overgrown farm lane past the quarry through a second-growth copse, and across the corner of an alfalfa field. At the edge of the alfalfa the soil suddenly disappeared, and we began walking on rock. As we looked up, we saw the ridge awash in color—the pink of Shooting Stars, the deep blue-purple of Bird's Foot Violet, the orange of Hoary Puccoon, the yellow of Golden Alexanders, and the white, lacy seed heads of Pasqueflower. We waded out through this sea watching the waves of color, fueled by a stiff northwest wind, rush past us and break upon the alfalfa shore. Although Aldo Leopold mused that the question as to what a thousand acres of prairie looked like as it tickled the bellies of buffalo was one which could never be answered (and perhaps not even asked), from our vantage point it was not hard to imagine.

Some of the very unusual plants I had seen before were also in bloom: the large white spike of Valerian, a plant more typical of subalpine grasslands in the Rockies; the small purple and white spikes of Richardson's Sedge, a plant which had not been reported seen in Iowa for over 120 years; the small seed heads of the Hidden Sedge, clustered like small grapes around its base; the moss-like clumps of Stiff Sandwort, a northern plant at the very southern

limit of its range. Turning around and taking one last look at the scene, we headed back to the car with the comforting knowledge that such places still exist.

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Our next two stops were relatively short. Tim wanted to show me the ghost town of Clay Mills, abandoned in the 1940s, and I wanted to see a series of tall bluffs along Farm Creek near Temple Hill where Tom Cooperrider had once found one of Iowa's rarest woody plants—the shrubby cinquefoil. I had never been to either place, but had looked at them with maps, and wondered. Clay Mills (or what's left of it) sits over a mile from the nearest road in a remote corner of the Farm Creek valley. The whole area is heavily grazed, and on the hike I wondered what used to grow on these wooded slopes. Might Goldenseal or Showy Ladyslippers have once been where now I see Plantain, Burdock, and Dandelions? There was not much left of Clay Mills itself—one house still standing, the rest (perhaps a half-dozen) in various states of collapse. I found abundant signs of the previous human settlement: large Catalpa trees, a few scattered apples and lilacs, and most surprisingly, a grove of large Beech trees on the steep valley-side near an old foundation. I can imagine the time, a century ago, when someone in the town decided to plant these trees to help shade that building from the August sun, or perhaps simply to remind them of the forests of their childhood a hundred miles or more to the east.

After leaving Clay Mills, we drove up the Farm Creek valley to the settlement of Temple Hill, now only a Catholic church and a large cemetery. In 1956 a mile east of there, Tom Cooperrider found a small bush called the Shrubby Cinquefoil growing on the open crest and side of a limestone bluff. Only three times previously had this

species been found in the state. Although I had seen it myself four times, I wanted very much to see it in Jones County. We parked and walked in along a farm road. Crossing an old field, now planted in trees, we walked toward Farm Creek. As we hiked through the relatively flat forest, we saw an opening, walked toward it, and found ourselves on the top of a sheer, 100-foot bluff overlooking Farm Creek. We walked among the Red Cedars which crown the bluff crest, occasionally testing the limits of our vertigo. We spent an hour or so exploring the cliff and valley, looking in vain for the Cinquefoil. It was only after I returned to North Carolina that I found we were searching one-eighth mile upstream from the place Cooperrider had visited.

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Looking at maps over the last few years, I was most intrigued by one place in Jones County: Whitewater Canyon along Whitewater Creek four miles east of Cascade. The term "canyon" is used judiciously in Iowa. I know of only two other places with the name "canyon" in the state: Brush Creek Canyon north of Arlington in Fayette County, and Preparation Canyon in the western Loess Hills. Both of these places have spectacular scenery as well as undisturbed natural habitats. Brush Creek Canyon, alone, supports populations of at least 20 rare Iowa plants.

Whitewater Canyon was shown on the maps to be almost two miles long and surrounded by 250-foot tall slopes on either side. Two narrow ridges, less than 200 feet wide and over 100 feet tall, were also shown in the deeply entrenched meanders of Whitewater



Creek. Along the entire length of the Canyon, all possible slope aspects were represented. With such an obviously interesting name and spectacular topography someone must have explored it. Yet, of the million or so plant specimens housed at the University of Iowa, Iowa State University, or the University of Northern Iowa, none were from this place. Neither Brown nor Cooperrider mention it in their respective treatises on the Jones County flora. The only person I had known who had visited this place was Terry Frest, who in the summer of 1986 explored the Canyon for ice caves and Pleistocene relict snails. Although his quest was unsuccessful, he told me that it seemed a place that ought to be looked at more closely. The time had come for some of its mysteries to be **uncovered**.

Unfortunately, I had left the topographic map of Whitewater Canyon back in Chapel Hill. I remembered driving past it in 1991, but my hope of finding the right roads dimmed as we turned onto a blacktop which had not existed two years before. Would I remember the correct gravel road to turn onto? At a big bend in the road I saw what looked like the right turn. Soon we saw woods on the right, and finally a glimpse of a far-off limestone cliff. One farm seemed to be the most likely access point. We received permission from the owners to hike back. Parking the car in with some machinery east of the house, we set off across a horse pasture to a ravine which cut down to Whitewater Creek. We crossed a fence and entered an old pasture, now grown up into almost impenetrable brush. Slowly we picked our way down the ravine, over rocks and around prickly ash, multiflora rose and gooseberry. At last the brush gave way, and we quickly maneuvered the last few hundred feet to Whitewater Creek. We had arrived.

A wooded bluff curved sharply up from the creek downstream of our position, a **short stone** cliff no more than



ten feet tall delineating the trees from the rapidly rushing water below. Upstream the woods seemed more heavily grazed—there was bluegrass visible and the trees did not seem as dense. Based on my memory of the map 1200 miles distant, I thought we had entered the Canyon about one-fourth of the way from the north end. If so, the steep north-facing slope downstream would lead us into the main section of the Canyon. After some deliberation, we decided that wading the creek to see the slope from the other side would have to wait for another day. We hiked up a steep incline until we were at least 75 feet above the creek and began to work our way downstream.

The slope was very rocky and steep. I held onto small trees to keep myself from losing my footing and taking a gravity-aided excursion. We crossed a rocky rill, choked with brush, and entered into undisturbed woodland. Ahead I saw a game trail and walked along it as it followed the least sloping ground. The woods became more moist and rich. It was not long until I found the first rare plant: Carey's Sedge (*Carex careyana*), a grass-like plant with clumps of broad leaves and long flower spikes. It is threatened in Iowa and was known from only a single other site in the county. Until 1990, when I discovered that other colony, it had never been reported from Jones County. A few more minutes. Another strange sedge, this one more upright. I didn't believe I had ever seen it before, and had no idea what it was. Upon returning to Chapel Hill, I was able to identify it as *Carex communis*, perhaps known from only a half-dozen other places in Iowa. Then, the third rare plant — Muskroot (*Adoxa moschatellina*), a boreal plant which drops south into the U.S. in the Rockies and at a few isolated places along the Upper Mississippi valley. It is threatened in Iowa, being known from less than three dozen sites. Cooperrider had found it

once in Jones County, as had I. Spectacular is a term which never will be used to describe Muskroot. It never exceeds four inches tall, and has leaves which look almost exactly like those of young Columbine. The green flowers, smallish in diameter, are borne on the end of a small spike. For all of its drabness, it is a favorite among botanists as it is the sole species in its family. After hiking one-quarter mile along this slope, we began climbing to the ridge crest another 100 feet above. At the top, I found the fourth rare plant *Sullivantia* (*Sullivantia renifolia*), an Upper Midwest endemic limited in Iowa to ten northeastern counties. It has shiny, round leaves and was growing out of wet crevices on a dripping, north-facing limestone cliff.

So far so good. But the ruddy light we encounter at the top of the ridge tells us that sunset is not far away. There is another game trail paralleling the ridge crest, which we soon realize is narrow with an opposing south-facing slope steeply dropping back down to the creek. The woods on top of this ridge are not nearly as dense, due not only to the drier soil, but also to some light cattle grazing. To the east among the trees, I see a grassy opening which strikes me as a bit unusual. Instinctively I head that way. Getting there, I see that this opening was natural and that it continued down the ridge. Through the trees I can see a limestone glade emerging down the ridge, with the tell-tale brown-tan of last year's native prairie grass, scraggly Red Cedars, the orange of Hoary Puccoon flowers, and bare patches of bedrock. Hurriedly I walk out on this glade. It is rather small, no larger than an average house, and is steeply sloping to the south. I reach the top of this slope. The ground is flat for ten feet, beyond which is a 50-foot tall north-facing sheer cliff. Around me are more rare plants—Richardson's Sedge, Hidden Sedge, Rock Sandwort. On the cliff, spilling over onto the glade





was the Shrubby Cinquefoil which we had looked for along Farm Creek.

Occasionally, when the light and mood are right, I can mentally fall through a crack in time and emerge in primeval Iowa. Turning around on this grassy prong, overlooking the wildness of Whitewater Canyon, I was transported there. I stood on this open glade and soaked in the view: the rushing cascade of Whitewater Creek flowed around the base of this narrow ridge 150 feet below. Gnarled Red Cedars clung to the bare rock at the edge of the cliff and glade. Dense, old growth timber clothed the hillsides, and on the opposite side another sheer cliff stood out as a cream iceberg, set off in the late afternoon light. A cool northwest wind rushed over this knob under a deep azure sky. Nowhere could I see evidence of Humans: no powerlines, tractors, fields, or roads.

Hiking back to the car, through more glades with Blue-eye Grass and Bird's Foot Violets, this enchantment did not wane. Even as we crossed an alfalfa field and a pasture, I was able to think of them as just some form of prairie. It was not until I arrived at the gravel road and the surrounding farms that I was brought back to the 1990s.

Did the people who lived here know about the magical place a half-mile downstream? If they did, what would they do with it? Would they, too, be carried into the past, or would they simply see it as waste land? Would they sell the timber to some local logger for a trip to Disney World? Would this logger turn 200 years of Iowa sunshine, wind, water, and soil into pallets?

Firmly planted now in modern Iowa, we drove back to Cedar Rapids, past miles of unplowed fields, waiting for the first dry spell to turn them into corn and beans. I could not (and have not) been able to shake the image of what we had seen—a wooded canyon in its pristine state, probably looking much the way Backbone State Park looked

before it was turned into a place of recreation. And, as far as I could tell, this was the first time that a botanist had ever seen that sight.

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**W**hy would anyone be interested in such non-descript plants?

Only a fraction of the state's flora is represented by large, showy species like White Oaks, Back-eyed Susans, Jack-in-the-Pulpits, or Yellow Lady's Slippers. Most of the plants in the state are tiny, have small, drab flowers, are not visible throughout the growing season, or are otherwise cryptic. Such plants are overlooked even by most botanists. However, as most of Iowa's rarest plants are included in such ranks, I have spent much time learning to locate and identify these nondescript members of the state's flora.

Consider sedges, for instance. The genus *Carex*, which includes the true sedges, is the largest single genus of plants in the state (over 100 species are known), while the entire sedge family is one of the largest in our flora (over 150 taxa). These plants are routinely ignored even by botanists because they are not very pretty (the flowers have no petals, the small clusters of seeds often mature within a month, and the entire plant looks just like a clump of grass), and are difficult to identify. Yet, this family constitutes almost 10 percent of the entire state flora. I did not want to ignore such an important group of plants, so I taught myself sedge identification. I have actually found them to be easily identifiable, and to be pretty in their own non-obtrusive way. Many of the rarest plant discoveries I have made have been of plants in this family—Slender Sedge, Field Sedge, Sterile Sedge, Carey's Sedge, Plantain-leaved Sedge, Richardson's Sedge, Assiniboine Sedge, Tawny Cottongrass. I can tell similar stories about other groups of overlooked plants in the state such as Rushes, Grasses, and others which are

all vital components to our biological diversity. For this reason, I end up spending much of my time stooped in the field, not tying my shoes, but looking for small plants that most people never even notice.

If I could choose one message I would like you to remember from this essay, it is that Iowa still is a mysterious and intrigue-filled land. Places like Whitewater Canyon still beckon the explorer, although their call is often hard to hear under the chattering of wind through the corn. You may think that the discovery of a place like Whitewater Canyon might happen once or twice in a lifetime. Not so. In the next week, I would find east of Hampton in Franklin County a virgin prairie/glade remnant over 60 acres in size, plus a number of smaller new glade sites in Cerro Gordo, Franklin, and Floyd Counties. In 1992, I located a 250 acre savanna along Blood Run Creek in the far northwest (undoubtedly the largest single piece of savanna in the state), the largest population of Woodland Horsetail and Primrose Violet in Iowa, plus 28 sites for Richardson's Sedge, last seen in the state in the 1870s. In 1991, I found ten acres of native short-grass prairie, along Blood Run, (harboring species not seen in the state in over a century), a population of an orchid last seen in Iowa in 1894, and three plant species previously unknown from the state. In 1990, I located an unreported 100-acre virgin prairie on the outskirts

of Charles City. In 1987, I located a 40-acre pasture near Walker which to date harbors four plants not known elsewhere in Iowa, plus 15 additional rare plants, most of them endangered in the state. The list goes on. It is rare when I go out for a day and do not locate at least one new population for some rare plant, or do not locate some previously unknown natural habitat.

For the time being, such places and species still exist in our landscape. However, I have seen so many places destroyed in the last decade that I know all is not well, even if the bureaucrats in Des Moines or lobbyists with the Farm Bureau want us to believe otherwise. I think we have perhaps 20 or 30 years to locate and help protect those places in Iowa which are still native and free; remaining after that may be only farm fields, interstate highways, mini-malls, subdivisions, or Wal-Marts.

So, look carefully next time you are out in the country. Soak in the history and heritage of the land, the place names, the creeks and rivers, the geology. Keep a close lookout for the unusual, whether it has a name or is simply an unplowed corner of some field. You, too, will discover the richness I have seen, and through all of our efforts in education and conservation, someone seven generations in the future may also be able to be amazed and intrigued by the sand dunes at Olin, wildflower fields near Canton, or the wild, rocky wilderness of Whitewater Canyon. □

