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Horicon Marsh: A Work In Progress

I walk northeast on a service road behind the Wisconsin Department of Natural Resources Flyway Center, which sits on the gentle rise of a drumlin on the northeast boundary of Horicon Marsh. I'm looking out over a soft gray-gold expanse of wetland grasses, dry and raspy in the early spring breeze. My view is dotted with patches of trees and shrubs, misted green with spring buds, and shallow pools of gently rippling water reflecting the steely blue smear of afternoon rain clouds. I smell death and life all at once—wet mud, rot, and new growth. And the sounds. My ears are full of a gentle, harmonious cacophony of chirps, twitters, squeaks, whistles, chortles, squawks and croaks. I cannot begin to identify any but the most common sounds, and I am happy to let the songs of birds, insects, and amphibians meld together into a lively, soothing chorus, punctuated now and then by the frantic splash of a startled muskrat.

All around me are birds I have never seen in 21 years of life in south central Wisconsin. The variety of ducks alone is astounding. As I walk further, I begin to confront huge gray geese, perturbed at sharing their walkway with me. They honk back and forth to one another in their strange goose language. When they give up on intimidating me with honks, they make short flights to the pools on either side of the road, skiing on large triangular feet before settling smoothly on the water's surface.

More than 260 different species of birds have been identified on Horicon Marsh. The marsh is part of the Ice Age National Scientific Reserve, and designated a Wetland of International Importance by the Ramsey Convention under the United Nations in 1991,

as well as a Globally Important Bird Area by the American Bird Conservancy in 1997. (Volkert 1999) And yet the Horicon Marsh is not—by conventional definition—anywhere near entirely "wild" or "natural." One can see simply from the loose grid of ditches and dikes delineated on the Horicon Marsh Visitor Map (1997), that this 32,000-acre (Volkert 1999) restored wetland is, of course, extensively marked by human hands and machines.

The story of the destruction of Horicon Marsh by humans in the early 20th century and its subsequent restoration by humans beginning in 1930 can partly be told today through interpretation of the marks left on the land. The resulting matrix of human design, created for the use of wildlife and people alike, forces a new perspective on the conventional dichotomy of "human" and "nature." In Horicon Marsh today, I see the two persisting together, as necessary parts of one whole.

From the observation deck next to the DNR Field Office near the northern boundary of the state-managed wildlife area, I begin to understand just how engineered this landscape is. The service road that had taken me just yards from huge wild geese is, I see now, a part of the extensive system of dikes and impoundments that state and federal managers constructed as part of the effort to restore the Horicon Marsh after its draining for agricultural. A number of the dikes are visible from here. The strangely rectilinear lines and boundaries imposed on the land are absolutely integral now to maintaining the wetland that persisted here from shortly after the most recent Ice Age, until late in the 19th century when it was first altered by European settlers (Volkert 1999).

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I feel I must be making some kind of awful transgression. I am driving on a narrow, gravel road extending into the center of Horicon Marsh. I press on anxiously, waiting for a surly warden to materialize at any moment and punish me, reminding myself that I am here because the DNR Naturalist suggested it. Driving into the middle of a wetland wildlife refuge is just a bit too strange for comfort. It's positively surreal that a perfectly dry road exists in this spot in the first place. My engine scares up ducks and other birds—grays and browns splashed with bright patches like a child drawing out of the lines. I am traveling directly west on the main dike that spans the entire marsh east to west. All I can see now of Horicon is the water tower and the John Deere factory on the northern horizon.

Construction of this dike by the federal government began in 1948 (Truax 1949). Restoration efforts, however, began much earlier. The Wisconsin legislature passed the Horicon Marsh Wildlife Refuge Bill in 1927, following a seven-year campaign spearheaded by conservation groups such as the Izaak Walton League of America (Volkert 1999). The bill allotted funds over ten years for the purchase of land and the construction of a dam in 1930 to re-flood the area. When state funds ran out, only the southern third of Horicon Marsh had been purchased and designated a State Wildlife Area. In 1941 the federal government purchased the rest and handed it over to the U.S. Fish and Wildlife Service for management as a National Wildlife Refuge. The main dike, and the subsequent impoundments, were built in order to extend the marsh without rendering some parts of it too deep, and to control water levels for optimal waterfowl habitat in general (DNR 1979, Palmer, 196?).

Almost halfway across the 4 or 5 mile-wide refuge, I reach the drain in the dike. The physics of this place is astounding. Here, a waterway extends roughly to the north and south. Five culverts, each about 3' in diameter, cut through under the road here. The opening of each is covered with heavy steel grids; the squares are roughly 5" on a side. Directly north of the dike a steel structure, that appears to control the flow of water and the movement of fish, stretches the entire 20-yard width of the waterway. One-yard openings between rusted steel supports are fenced with vertical steel rods placed 3" apart, probably to deter carp from migrating throughout the marsh, thereby making their perpetual management just a little less of a headache (Volkert 2002). Some of the openings are also blocked entirely with 4'x4's. These, I imagine, are removed and added as necessary to further regulate the flow of water and, during times of high water, to help keep the dike intact.

I've reached the end of Dike Road. I'm on a small observation deck—complete with comfy bench for lounging—that sits on what appears to be a river flowing slowly south, through the virtual center of the marsh. This lovely spot is certainly the witness to all kinds of nature-seeking visitors. I feel very far from the surrounding towns and farm fields. Abandoned fishing lures and bobbers wrapped obstinately around a tree branch that reaches out over the water bear silent testimony to the young anglers that must frequent this deck. The "river," though, is oddly uniform. As far as I can see to the north and south, its course is ruler straight, and its width is a constant 10 or 15 yards. There is no interpretative DNR sign to mark this as the main ditch dredged to drain the area.

This peaceful spot is juxtaposed in my mind with black and white images dating from 1910 to 1916. The first is a photo of the massive dredging machine used during that

time to drain the marsh in the name of agricultural profit, surrounded by ladies and gentlemen dressed in their finest, gathered to watch the progress of their community (Volkert 2002). The machine, a steam shovel mounted on a barge, dredged this ditch, running nearly the entire 15-mile length of the marsh from north to south. The lateral ditches that feed into this one bear names like Miescke, Burnett, Lehner, and Sommers—presumably the names of landowners eager to expand agricultural production.

Truax (1949, p3) explains the chain of events that led to the draining of Horicon Marsh thus,

> "Drainage interests petitioned the courts to incorporate the Horicon Marsh in a drainage district. These interests were represented by a Mr. McWilliams and associates. The petition was filed in 1904, and later the State Supreme Court held that the Rock River and various bays of the Horicon Marsh were navigable and the courses could not be altered. Disregarding the courts ruling, the drainage interests began ditching the marsh in 1909…Land thus reclaimed for agriculture sold for as much as $400.00 per acre."

An emphatic promotional letter to potential investors written by a Mr. B.H. Tallmadge in 1914 explains the vision of progress that these "drainage interests" had in mind. He cites the evaluations of two separate scientists that explain the agricultural promise of the newly exposed peat. Prof. Charles W. Stoddard claims, "The cost of fertilizing such soil would not run more than a few dollars per acre, and in all probabilities most excellent crops of timothy and alsike clover could be obtained for hay. Corn, cabbage, rape, buckwheat, potatoes, and possibly barley and particularly truck crops would grow well" (Tallmadge 1914 p 3).

More photos picture both the triumph and failure of these men. They feature the first furrows plowed into the exposed peat, and then entire plowed fields, complete with

triumphant, suited men in the foreground (State Historical Society of Wisconsin 2002). Later photos, beginning in the early 1920's, picture the scorched, barren landscape those furrows became once the peat began to dry out and smolder (Volkert 2002, Palmer 1962). Peat fires burned almost perpetually through the '20's and into the '30's. One fire burned for three years straight. They were finally extinguished—years after any thoughts of agriculture on the peat had been abandoned—when the dam was built in 1930 to flood the area and begin restoration. (Volkert 2002).

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I am in search of a good vista of the Greenhead impoundment. I've already been at the edge of the smaller Phil's Island impoundment that lies north of the main dike. A large gray goose waddled along the human-made, grassy strip that served as the shore of the artificial pond constructed within the wetland. The sun is low enough now to peek a blazing face out from under the thick cloud cover, preparing to make a break for the horizon and leave me in chilly dusk. I am tired, annoyed at the potholes and my parents' low clearance vehicle, and ready to leave the area without having seen the Greenhead impoundment at all. These thoughts disperse quietly into the moist, cool air as I catch movement ahead of me to my left. An animal is foraging slowly on the upland in front of me. I squint for a moment, and the gangly fawn I envisioned at first morphs into a sandhill crane.

I get out of my car quietly and stand in awe of this oddity of a bird. With her neck fully extended, she is only a head shorter than I am. She stands on one long, impossibly thin leg and regards me with little interest. She's never been hunted and is probably used to the dumbfounded gazes of wildlife watchers. After she lifts herself

away on long, slow-motion wings, I walk out onto the burned area that she had been grazing. A lightning strike set the hillside ablaze just a few days earlier, (Volkert 2002) and the sweet smoke smell of scorched grasses rises from the blackened ground. I look down to the southwest and realize that the crane has inadvertently shown me the best spot around to see nearly the whole of the Greenhead impoundment. Grassy strips roughly 6' wide curve out to the west and south to enclose and egg-shaped pond about a half a mile across east to west and one mile north to south.

This, my final experience in the marsh today, illustrates the themes that I have confronted throughout my visit. The Horicon Marsh is a place where human interests have explicitly and tangibly directed the destruction and subsequent restoration of an entire ecosystem. As a result, the land is an odd patchwork of images consisting of recognizably human constructs, interposed with "wild nature." And the two appear to be intertwined relatively harmoniously. The area is canoed, hiked, biked, hunted, and fished for much of the year, and healthy bird populations persist. In fact, it is clear that at this point, the habitat for the sandhill crane I've just seen can't persist without human regulation. This story makes it clear that "human" and "nature" need not always be portrayed as a hopeless dichotomy. Unfortunately, this story also overlooks the less obvious and more troubling ecology of Horicon Marsh.

Although, state and federal managers continue to enhance the marsh for human and wildlife uses to the best of their ability, it is not enough to manage only the marsh, which is the low point of an entire watershed. William Volkert (2002) is the current DNR Naturalist and Educator, and has work on the marsh for 18 years. He explains that wildlife managers have progressed to focus on the marsh as a part of an ecosystem, rather

than concerning themselves with only a single species population living on the marsh. As such, Volkert cites poor water quality as a persistent threat to the marsh. Further, the poor water quality of the marsh is a result of land use practices on the surrounding land. The modernization of agriculture, with its heavy use of chemical pesticides and fertilizers and increased erosion, has led to siltation and nutrient loading in the marsh. Human and wild needs must reach compromises within and without of Horicon Marsh in order for restoration to progress any further. The perception of humanity separate from nature—easily dispelled inside the refuge—must now spread to reach the communities outside of the refuge as well.

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