

PASSENGER PIGEON WALK 2009  
The floodplain and land stewardship  
Mississippi River Revival, sponsor  
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As Lafayette Bunnell canoed near La Crosse about 170 years ago, something crashed in heavy timber and boomed like “the letting off of steam.” “Limb after limb” fell as millions of passenger pigeons crowded onto tree-perches at a nest colony stretching 45 miles downriver. Since the doves grew extinct as farms deforested wooded habitat, and the Mississippi currently flushes overloads of sediment into the Gulf of Mexico, the third annual Passenger Pigeon Walk will envision clean water and erosion-free agriculture while recalling doves filling skies above Wapasha's Prairie.

Meet at Aghaming, the Wisconsin end of the Wagon Bridge, 10:00 A.M. and 1:00 P.M. I'll share passenger-pigeon history and lead 90-minute walks hosted by the Mississippi River Revival and Land Stewardship Project, a nonprofit network who advocates sustainable farming. We'll visit secret habitat niches—one hole from which hooded merganser chicks leap 50 feet down into backwaters--another sometimes used by luminous warblers from mangrove swamps--a third chiseled by sap-thirsty woodpeckers shadowed by hummingbirds.

We'll seek the rusty blackbird, a species in 95-99% decline, who forages Aghaming by the thousands. We'll hopefully scope lesser scaup, ducks who struggle to find food from the Zone of Hypoxia at the river's mouth to nitrate-polluted wetlands in the Upper Midwest. We'll also visit sloughs which grow filmy with soupy-green goop by August, and discuss runoff impacting food webs here and in the gulf.

Nitrates concentrate in the upper Mississippi at levels ten times greater than pre-development times, and phosphorous in Lake Pepin, four times greater, says a new scientific paper co-authored by Dr. William Richardson, aquatic ecologist at USGS Upper Midwest Environmental Sciences Center.

Row-crop corn and soybeans are the largest source of nitrogen, derived mostly from synthetic fertilizers, nitrates, says Richardson. Animal manure—pasture, range, feedlots—contribute the most phosphorous. The nitrogen and phosphorous flow downriver and help cause detrimental algae blooms that deplete oxygen in the Gulf of Mexico. The upper Mississippi contributes about one-third of the nitrates and phosphorous to the gulf, helping to kill and diminish organisms such as snails, mollusks, crabs, starfish and worms.

“Elevated levels of nitrogen and phosphorous also change oxygen content in upper Mississippi backwaters, causing swings during late summer that bottom out so low that shrimps, zoo-plankton, crustaceans and other invertebrates can suffocate from lack of dissolved oxygen,” says Richardson. “Increases in phosphorous and nitrogen can cause blooms of blue-green algae that are toxic and difficult to eat. Inedible algae can dominate, and algae-eating bugs and shrimps can literally die in a sea of green. The problem with dead bugs and shrimp is these animals form the base of the river's food chain.”

“Agriculture doesn't have to pollute water,” says Doug Nopar, staff, LSP. “Crop rotation can prevent nitrogen runoff. Rather than mono-cultures of corn, plant maybe oats and barley one year, then corn, soybeans, maybe corn again, then alfalfa and oats. Alfalfa fixes nitrogen to soil one year. Plant corn the next, it doesn't need fertilizer.”

“The crux of reducing runoff is high soil life,” says Duane Hager, a farmer in Kellogg. “Healthy soil is loose and crumbly and absorbs rain, so the nutrients stay where they are.” Hager says LSP helped give him direction after he bought rundown land. He controls weeds by cultivation, not chemicals. He adds natural minerals to soil, and after he harvests corn, he likes to sow densely-rooted rye as winter cover, an alternative to bare winter fields exposed to spring rains. Hager grows 200 acres of corn in contour strips and raises beef and dairy cattle by rotating pastures.

“Rotational grazers control manure runoff by mimicking buffalo herds, who would forage at one place, leave, allow regeneration and return much later,” says Nopar. “Farmers can feed livestock grass instead of row-crop grains. Break up pasture into managed paddocks, let livestock graze a day or two, move them and return to paddocks in about a month. This spreads out and limits manure, encourages livestock to eat diversely and lets plants grow and retain roots and moisture, so the manure's nutrients sink into soil and don't end up in backwaters or the hypoxia zone. Cows don't stay in barns, so farmers don't burn so much transportation fuel hauling away manure or delivering feed.”

LSP facilitates free-market profits. It connects, for example, organic dairy farmers with organic corn growers and locally-raised foods with local schools. Caroline van Schaik, LSP staff, has also helped initiate wildlife monitoring, measuring impacts of delayed hay cuts, rotational grazing and other conservation practices on grassland birds like bobolinks and dickcissels.

Van Schaik will walk with us, answering questions. We'll scope an osprey nest, proof agriculture can co-exist with the floodplain's endangered species, thanks to the DDT ban. Please, bring kids and binoculars.

*Info in this story derived from History of Winona County, H.H. Hill, Birder's Conservation Handbook, Jeffrey Wells, [www.RiverBirdBlog.com](http://www.RiverBirdBlog.com) and [www.landstewardshipproject.org](http://www.landstewardshipproject.org). The story first appeared in the Winona Daily News, April 2010.*