

How Wild Rice Forecasts Climate Change

Manoomin, a crop vital to the Indigenous peoples of the Upper Midwest, has been threatened in recent years. But careful stewardship is helping to bring it back.

By Kevin Noble Maillard

Reporting from Troy, Mich.

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Dr. Dwayne Jarman is often tinkering with the wild rice machines in his garage in this tree-lined suburb of Detroit. He has threshers to crack the hulls and winnowers to blow the chaff. He smiles and flips the switch. It's time to process last summer's harvest from his Anishinaabe homeland near Traverse City in Northern Michigan.

"I want to do the rice all year round because I'm trying to reconnect to the things that matter," said Dr. Jarman, a veterinarian. When he's not working his day job, he harvests hundreds of pounds of rice, which he shares with friends and family. For him, harvesting and processing the rice is not only a labor of love, but also a preservation of an Indigenous food under constant environmental stress.

Recipe: Wild Rice Porridge

Climate change and human impact have significantly depleted the natural abundance of manoomin, the "good berry" as wild rice is known in Anishinaabemowin, an Indigenous language also known as Ojibwe, and protecting it is synonymous with preserving cultural identity.

Wild rice is sacred and central to the creation story of the Anishinaabeg, a vast cultural and linguistic collective that includes the Ojibwe, Odawa and Potawatomi. Under an ancient prophecy known as the Seven Fires, the ancestors left their Atlantic Coast homeland and migrated westward to the “land where food grows on water.”

That place is now known as the Great Lakes region of the Upper Midwest and Central Canada, where manoomin grows in low-lying lakes and meandering streams.

Manoomin, an aquatic grass, is particularly susceptible to deforestation, rising temperatures and extreme weather events.

Manoomin seeds incubate in cold, muddy bottoms in the fall and winter and begin to germinate when water temperatures reach 45 degrees in the spring. The plant needs at least a foot of fresh, moving water for the stalks to grow.

“The rice is the canary in the coal mine,” said one ricer in Minnesota. Associated Press

Unlike commercially grown wild rice, which is bred for growth in planned environments and ripens simultaneously so that it can be harvested by a mechanical combine in a single pass, manoomin is harvested by ricers in canoes. One person stands and propels the boat (the “poler”), and the other collects rice into the bed with sticks (the “knocker”). Canoes can’t float in mud.

David Wise, a 56-year-old Ojibwe rancher and lifelong ricer, has seen drastic changes in water levels near his home on the Fond du Lac reservation in Minnesota. When a lake in the ceded territory sank so low that canoes were getting stuck, tribal ricers had to build a 50-yard boardwalk.

“The rice is the canary in the coal mine,” said Mr. Wise, referring to the plant’s sensitivity to ecological changes. “You can tell a lot about the year when you look out on the lake.”

Myron Burns Sr., who is known as Burnsie, is an 86-year-old elder at Bad River reservation in Wisconsin, where a nearby oil pipeline worries residents. He describes muskrats, which are herbivorous, as caretakers of the rice beds. “You plant a garden and don’t take the weeds out of it, the weeds will overcome your fruit,” Mr. Burns said.

Several years ago at Bad River, when outsider overtrapping of muskrats left no natural control for cattails and pickerelweed plants, the manoomin stalks suffered. After the muskrat population was reintroduced in subsequent years, mammalian horticulture returned. “The muskrats started coming back, and the rice is coming back,” Mr. Burns said.

Recipe: Burnsie’s Cheesy Wild Rice and Chicken Soup

Threats to wild manoomin have spurred restoration movements in Indigenous nations, and legal and educational institutions have stepped in to help. The White Earth Nation has sought to enforce the “rights of manoomin” under several historic treaties, and a number of Indigenous bands have partnered with universities for research and data collection. As Karen Diver, the senior adviser to the president of the University of Minnesota for Native American affairs, explained, “researchers are impacted and informed not just by science, but by understanding the cultural values of the tribe.”

Those values start at the tribal level. Manoomin is more than sustenance: It is a sacrament of Indigenous connection and an assertion of identity. Tina Frankenberger, who sits on the tribal council of the Grand Traverse Band, first started ricing in 2016, and is helping others to follow suit.

“It is important for people that do not have that relationship yet to realize how important this is to us Anishinaabe,” she said. “I believe that this is a way of laying down a pathway to bringing home people who are lost.”

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Burnsie's Cheesy Wild Rice and Chicken Soup

Recipe from **Myron A. Burns Sr.**
Adapted by **Kevin Noble Maillard**

Updated May 20, 2024

Total Time 1¼ hours

Prep Time 15 minutes

Cook Time 1 hour

Rating ★★☆☆☆ (24)

The Anishinaabeg have harvested manoomin, or wild rice, in the area now known as the Great Lakes for hundreds of years. Myron A. Burns Sr., who goes by Burnsie, a lifelong ricer and elder of the [Bad River Band of Lake Superior Chippewa](#), combines hand-harvested manoomin, lean meat and rich dairy in a single pot to produce this hearty soup. Natural manoomin is knocked into canoe beds with wooden sticks, then dried, hulled and winnowed by community members, producing a soft, flavorful brown rice that cooks in 15 minutes. This differs from the commercially cultivated wild rice sold in supermarkets, which is grown in artificial paddies and processed by machine, producing a chewier black rice that takes at least 45 minutes to cook. You're urged to seek out manoomin for this recipe (see Tip), but you could substitute store-bought, commercially cultivated wild rice if preferred. Top this soup with herbs and pair with crackers for a thoughtfully satisfying meal. —**Kevin Noble Maillard**

INGREDIENTS

Yield: 8 servings

1 cup manoomin (wild rice); see Tip
4 cups low-sodium chicken broth
1 pound boneless, skinless chicken thighs, cut into bite-size cubes
Salt and pepper
4 strips of bacon, cut into ¼-inch-thick lardons
1 (10-ounce) can cream of chicken soup

PREPARATION

Step 1

Parboil the rice: In a large Dutch oven or pot, rinse dry rice with warm water until clear, swishing the kernels with your hands and refilling with more warm water until clear and free of debris and impurities. Drain, leaving rice in the pot, then add the broth. Cover the pot with a lid and bring to boil over high heat. Reduce heat to medium-low and simmer, undisturbed, for 10 to 15 minutes. (For commercially cultivated wild rice, simmer for 45 minutes, or according to instructions on the package.)

Step 2

1 teaspoon garlic powder
1 lemon, zested then halved
1 pound Velveeta cheese, cut into 1-inch cubes (see Tip)
1 cup half-and-half
¼ cup fresh lemon juice
Paprika (optional)
Chopped scallions, chives or parsley, for topping

While the rice parboils, scoop the chicken into a medium bowl, toss generously with salt and pepper and set aside in the refrigerator.

Step 3

Cook the bacon lardons in a small skillet over medium-low, stirring frequently, until soft and translucent but not crispy, about 3 minutes; set aside.

Step 4

Taste the rice to check doneness before proceeding. It should be soft and somewhat chewy; the rice will be ready when steam escapes from underneath the lid. Do not drain.

Step 5

Once the rice is ready, begin the soup: Thoroughly stir the rice, which will start to split in the water. Keeping the temperature at medium-low, gently add the seasoned chicken to the rice and broth. Transfer the bacon and rendered bacon fat from the skillet into the pot, then add the cream of chicken soup, garlic powder and lemon zest. Cover and simmer on low to medium-low heat for 15 minutes.

Step 6

Once the broth has thoroughly cooked the chicken, add the Velveeta and half-and-half and stir until smooth.

Step 7

Immediately prior to serving, squeeze in lemon juice to taste and stir thoroughly. Season to taste with salt and pepper. Top with paprika (if using), garnish with fresh herbs and serve.

TIPS

A culturally significant food traditionally produced in Indigenous communities, natural manoomin is sold online by Indigenous sellers on Etsy, and [Red Lake Nation Foods](#) offers a variety of wild rices. Check the packaging of your rice for recommended boiling times.

Other cheeses, such as Cheddar, mozzarella and especially store-bought shredded cheeses, do not melt as easily as Velveeta does. However, if you'd prefer to use a mild block cheese, grate it first then gradually stir it into the soup at the very end of cooking.

Private Notes

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