When the eyes of the golf world turn to the North Carolina Sandhills in June for the U.S. Men’s and Women’s Opens, you’d think the people at the Pinehurst Resort and Country Club would want the renowned No. 2 golf course to be perfect.

After all, the United States Golf Association is attempting to do something that’s never been tried with its two premier national championships by holding them on the same course on consecutive weeks. It’s perhaps the most daring action the staid ruling body for American golf has ever tried — and the glare of the spotlight will be blinding.

But if viewers cast their gaze off the course’s fairways, they’re in for a surprise. The grounds now abound with a variety of native plants, giving the course a simple, natural feel. That’s by design.

To help manage what grows in those areas off the fairways, a research team from NC State, led by crop scientist Danesha Seth Carley, has spent the last three years helping Pinehurst determine what native grasses and plants the world will see when the famous course is once again on display throughout the month of June.

A BOLD REBUILD

Built in 1907 and lovingly maintained by master architect Donald Ross for decades, No. 2 course went through a radical restoration in 2010, as accomplished player Ben Crenshaw and noted architect Bill Coore stripped out everything outside the fairways and returned the course to Ross’ original design.

There is zero rough — the tall grass off the fairways that the USGA typically grows up to four inches tall for its championships. The course still has its signature turtle-back greens and lush, though significantly squeezed, fairways.

Hundreds of acres of Bermuda rough that had been rolled off the fairways when others tried to “improve” the course were removed. Now, instead of landing in tall grass, an errant shot will end up in sand or on pine straw.

In addition to the 200,000 sprigs of native wire grass that Pinehurst loves to use in the natural areas of all eight of its courses, there was little else on the grounds of No. 2 other than pine cones and gray squirrels.

For Carley and her students, it was an unprecedented blank slate that allowed them to study how plants return to their native environment, recovering from decades of importing ornamental plants for landscape aesthetics more than for their sustainability. Azaleas in spring may be gorgeous on television, but the ones used on most golf courses are an introduced species in the Southern states.

Gradually, native plants were carried back to No. 2 by Sandhill breezes and native birds or emerged from the uncovered seed bank in the sandy soil. Some offered lovely bursts of color against the khaki- and brown background, like the soft yellow flowers of the pineweed, the juicy red fruit of the Eastern prickly pear or the tiny pink flowers of the “Kiss Me Quick” pigweed.

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Others were as unwanted as a double-bogey, just begging for a good dose of Roundup.

“One of the tricky things about identifying plants on a golf course is that it is an artificial setting,” Carley says. “What we are trying to do here is encourage the desired native species to grow in the areas around the golf course.”

Carley and her team identified some 75 native species that sprung up in and around the ragged natural areas of the course. They helped the maintenance staff identify the plants that should be allowed to flourish, developing a biodiversity of plant life that will allow the course to become more environmentally sustainable and maintenance friendly.

“We originally came down here to say, ‘Here’s what you’ve got,’” Carley says. “What we ended up doing was making a broader biological survey, with plant counts and a process for identifying the plants that need to stay and those that need to go. The plants that stay, in other circumstances, might be considered weeds.”

The off-the-fairway environment will be an important part of the competition, if one of the world’s best golfers happens to hit an errant shot off the tee or miss one of the imposing greens on an approach shot.

“It’s one thing for them to miss a shot and end up in four-inch rough, because the best golfers know what to expect when they hit off of grass like that,” says Bob Farren, Pinehurst’s director of golf maintenance and grounds. “But if a ball rolls behind some native wire grass, or up against a native plant or into the soft sand instead of hardpan, they really don’t know what to expect.

“It will be a big part of the competition this summer.”

A BENEFICIAL CHANGE

The radical transformation at Pinehurst has been called “the boldest renovation in golf course history,” mainly because it returns the property to its starker, pre-World War II look, before developers thought the best way to make a golf course attractive was to put down a thick carpet of Bermuda grass that needs a lot of water to grow and heavy equipment to maintain.

The native plants that emerged since the course reopened are much easier to maintain. They need less water and little cultivation. Carley saw similar results when NC State was building its Lonnie Poole Golf Course on Centennial Campus, an open-to-the-public course that is also used as a massive outdoor laboratory for turfgrass management and professional golf management students. The Audubon Silver-rated course, built by the Arnold Palmer Design Group, opened in 2009 and is recognized for its use of native grasses and plants.

Carley and her students developed guidebooks for the maintenance staff to use, identifying which plants were pleasing and necessary to keep and which needed to be sprayed with weed killer. For No. 2 course superintendent Kevin Robinson and assistant superintendent John Jeffries — both NC State graduates — it was a helpful way to educate their staff and allow native plants to flourish.

“Our goal was to enhance the biodiversity of the course and improve its sustainability,” Carley said. “It’s the perfect place to study this because the redesign took the rough down to its original subsurface.”

One of the first things that redesign architects Coore and Crenshaw did was remove some 700 sprinkler heads from the intricate irrigation system.

Last year, during a rainy growing season, the course used just nine million gallons of water to supplement the area’s 61 inches of rainfall, down from the 50 million gallons it used before the redesign.

The research done at No. 2 could eventually improve North Carolina’s $2.3 billion golf industry, which includes 556 golf courses, 52 stand-alone driving ranges and 44 miniature courses and some 53,000 jobs across the state.

“While every course is different, the concepts we are trying to introduce are the same: increase biodiversity, increase the wild habitat, decrease the chemicals and water needed to sustain the course,” Carley says. “This was the perfect place to start.”

The crowds watching this summer’s championships will be huge, but the audience will also include industry professionals who will be interested in how the rebuilt and refurbished course, and all of its native plants, will maintain the traffic and recover from the USGA’s boldest experiment.