



*"There's a whole lot more than golf going on here now."*

# **Arkansas Golf Course Boasts Native Prairie, a Variety of “Birdies”**

**John Doty | NBCI Communications Director**

It began as a simple quest by a self-described “Oklahoma country boy” to reduce the maintenance costs on the 27-hole Ben Geren Golf Course in Fort Smith, Arkansas, which had a maintenance crew barely large enough to maintain 18 holes.

The result was a gem in the Natural State’s second-largest city that is attracting a broad spectrum of interest, from Arkansas Audubon to the Southeastern Grasslands Initiative to Future Farmers of America classes, the state’s botanist, the US Fish and Wildlife Service, and others. And at least two coveys of bobwhites, one at each end of the course, have also taken up residency here.

“There’s a whole lot more than golf going on here now,” says course superintendent Jay Randolph.

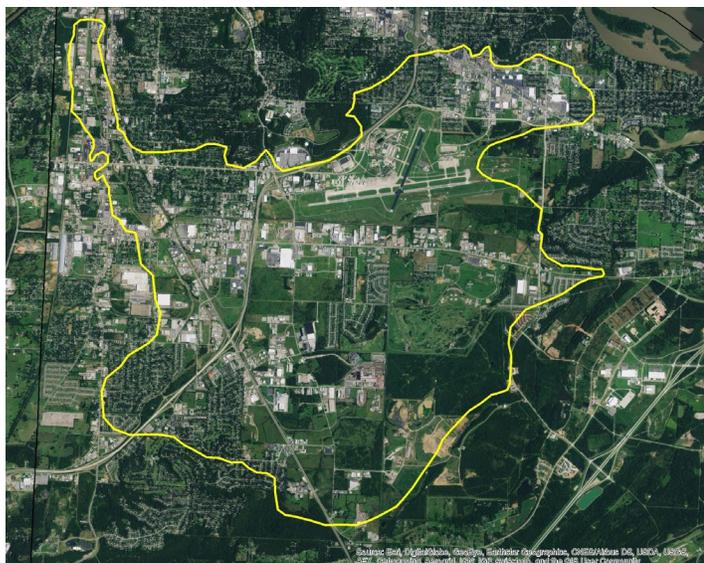
This wasn’t Randolph’s first rodeo... or golf course. Upon arriving in early 2016, “I knew we needed to reduce

mowable acres,” said Randolph, who grew up in the Osage plains of Oklahoma hunting prairie chickens and bobwhites. And he was just 15 hours away from a wildlife biology degree from Northeastern State University when he jumped to Oklahoma State to earn a degree in horticulture (with a specialty in turf grass) and launch a golf course management career.

During his search for potential solutions at Ben Geren, he discovered the 275-acre course was set amid what was once the 10,500-acre Massard Prairie, a large, tall grass prairie of native grasses and forbs that had been reduced by development to only 200 scattered acres. He also discovered the course even had a few tiny scraps of prairie, scraps that were being consistently mowed as part of facility maintenance.

“I decided to explore the possibility of returning areas of rough to native prairie and salvaging the existing remnants,





**Above:** Original Massard Prairie boundary from the land township map survey in July 1829; the golf course and park are just right of center on the map.

reestablishing the ecosystem and what comes with it," Randolph said. He contacted the Arkansas Game and Fish Commission (AGFC) to see if they could offer any assistance. "I just needed some advice."

AGFC's Levi Horrell, current assistant regional supervisor at the Beaver Lake Regional Office, responded with the state's Acres for Wildlife Program ([www.agfc.com/en/get-involved/in-the-field/acres-for-wildlife/](http://www.agfc.com/en/get-involved/in-the-field/acres-for-wildlife/)), which provides free technical assistance, as well as free packets of seed with a mixture of native warm-season grasses and forbs for qualified applicants.



**Above Left:** Prescribed burn in December 2017 on prairie acres next to a sand bunker; "We really try to blur the edges between golf course and native prairie habitat," says Randolph. **Above Right:** Post-burn around a tee box complex; "The burn gives us the ability to go back in and seed other grasses or forbs we don't currently have in those areas. Also, switching to native vegetation around the tee complexes helps us reduce water use." Photos by Jay Randolph.

### 2016

To begin saving the prairie remnants at the golf course, Randolph sprayed 12 oz/acre Plateau plus 1 qt/acre methylated seed oil in early April 2016 and then mowed the remnants down to 6-8 inches "to get as much light to the soil as possible to help seed bank germination" later in the year. He also began collecting seed in June from the few remaining virgin prairie sites, continuing into November. At the end of the 2016, season records showed 70 forbs and 22 grasses in the golf course's remnant areas, including big bluestem, little bluestem, Indiangrass, switchgrass, and three native species of milkweed.

The growing season was also spent backpack-spraying non-native invasives in the remnants, most notably Japanese honeysuckle, Queen Anne's lace, and sericea lespedeza, an approach applied annually.

Conversion work on the areas of rough started in April with application of glyphosate and fluazifop, and then glyphosate only in June, August/early September, and mid-October. This routine would be repeated annually. Some of the areas under re-construction were also seeded.

It was this year that he heard the first quail. "I have no idea where it came from, but Fort Chaffee [which the course was originally part of] actively manages for quail on thousands of acres. It's about two miles away, as the crow flies."

### 2017

In early 2017, Randolph requested a prescribed burn on 15 of the course's prairie remnant acres, with the help of the Arkansas Forestry Commission and the volunteer fire



departments from Barling and White Bluff, and began hand-seeding the acreage with prairie seed collected in 2016. This year, he not only collected seed again from the virgin prairie remnants outside the golf course, but also transplanted about 60 plants from a virgin area that was being developed as a subdivision. Among the species were Nuttall's pleatleaf, pink milkwort, and Oklahoma grasspink orchid, all rare.



**Above:** Nuttall's pleatleaf, a plant of conservation concern in Arkansas. Photo by Karen Schwartz.

The glyphosate/fluazifop spraying routine continued on the areas of rough under re-construction. In mid-April, volunteers seeded 15 acres using the state's Acres for Wildlife mix and seeded additional re-construction areas with the native prairie mix collected earlier.

The day before Christmas, Randolph had another prescribed burn of the course's remnant areas, plus much of the re-constructed areas of rough.

### 2018

This year, the remnant areas have been seeded by hand and drill, and seed collection from virgin prairie remnants is once again underway. Areas of rough under re-construction are being sprayed and 15 acres seeded with the state's Acres for Wildlife mix.

### The Reaction

"We have a lot of people come through here to see what we've done, and we have golfers come in talking about hearing and seeing quail, especially now that we have two coveys and the birds are nesting," says Randolph.



**Above:** Bobwhite nest found on Ben Geren Golf Course. Photo by Jay Randolph.

That's not all. In addition to the course's relationships with AGFC and the Arkansas Forestry Commission:

- The Arkansas Natural Heritage Commission inventories plant species and provides advice;
- Arkansas Audubon's NATIVE Project (Native Agriculture to InVigorate Ecosystems) uses seed from five different native forbs at the golf course to provide to eligible farmers for planting in one- to nine-acre plots so they can grow and sell the seed themselves. The hope is to have enough native Arkansas seed to be used in projects across the state ([www.ar.audubon.org/sites/g/files/amh656/f/static\\_pages/attachments/audubons\\_native\\_project\\_fact\\_sheet.pdf](http://www.ar.audubon.org/sites/g/files/amh656/f/static_pages/attachments/audubons_native_project_fact_sheet.pdf));
- The Arkansas Audubon Society started conducting bird inventories this year for the golf course;
- The University of Arkansas and University of Arkansas/Fort Smith are both conducting research projects on the course;
- Western Arkansas Master Naturalists harvest seed and help with native prairie education and outreach;
- Future Farmers of America (FFA) chapters bring members to the course for educational activities related to native prairie;



**Above:** Jay Randolph explains the habitat restoration work underway to a group of Branch High School Future FFA members. "We're teaching them tall fescue with seedheads waving in the breeze is NOT prairie," he says. Photo by Ron Koch.

- Several local photographers in the area have made the golf course a regular stop;
- The discovery of the Rattlesnake Master, a forb characteristic of tall grass prairies, and the rattlesnake master stem-borer moth (*Papaipema eryngii*), a candidate for listing which requires this specific plant to complete its life cycle, attracted quite a congregation. AGFC personnel, the US Fish and Wildlife Service, the University of Arkansas, the





**Left:** Western Arkansas Master Naturalists coordinated a butterfly walk in the Massard Prairie Reestablishment Areas this summer as part of National Pollinator Week.



**Above:** Rough blazingstar blooms in late summer/early fall, attracting a whole host of pollinators when not much else is blooming. Photo by Karen Schwartz. **Below:** Prairie blazingstar in bloom. Photo by Jay Randolph.

**Right:** Lori Spencer, the "Arkansas Butterfly Lady," points out a butterfly to a budding naturalist on the butterfly walk.



**Left:** Swallowtail butterfly in the early morning light. **Center:** Gulf fritillary butterfly, whose butterfly uses the Passionflower vine as a host plant. **Right:** Hummingbird moth pollinating rough blazingstar. In addition to attracting pollinators, these forbs and native plants bring in many small insects for bobwhite chicks. Photos by Karen Schwartz.

Arkansas Natural Heritage Commission, and Jim Wiker, a renowned lepidopterist from Illinois, joined up to investigate. It was found between holes 3 and 4 on the “Silo” portion of the course. (“It just shows it doesn’t take huge areas of conservation to have a large impact,” says Randolph.);

- Randolph has addressed gatherings of personnel from other golf courses around the state and several are expressing interest.

**The Future**

The golf course’s 90 acres that Randolph has established in prairie will have to be maintained, of course. But now he has his eye on 200 acres of woods across the road, which is part of the 1,200-acre regional county park, just like the golf course.

“It used to be prairie,” said Randolph. Thinning, burning and resurrection of another piece of prairie appears to be in the future.

Did his strategy save Ben Geren money? “I’m not sure I can say that, because we invested what we saved into other course improvements,” Randolph said.

So could the kingdom of maintained turf grasses play any sort of role in bobwhite restoration?

Randolph is adamant: “Every single golf course has some acres they can put into this kind of management,” Randolph asserts. Translated into the NBCI regional context, it means approximately 9,600 golf courses in the 25 NBCI states with an average size of 150 acres, or approximately 1.45 million acres. Sixteen percent of those acres, on average, are in “rough.” That’s 232,000 easily accessible acres that draw thousands of visitors each year.



**Above:** Prescribed fire is applied to the area around The Silo, which was built in the 1880-90s and is the namesake for the “Silo 9” holes of golf. The site was the first documented farm in Arkansas to use bermudagrass as forage for livestock. Photos by Jay Randolph.



**Above:** Bobwhite habitat restoration sign at Ben Geren Golf Course. Photo by Jay Randolph.

“I applaud Jay Randolph for initiating the project at Ben Geren because it utilizes the rough areas of the course to benefit quail habitat and reduce labor and maintenance costs associated with these areas,” said Marcus Asher, the state’s quail coordinator. “It’s also a tremendous marketing tool for habitat in general because the course is highly visited, and the showy nature of the wildflowers creates an eye-pleasing landscape for golfers enjoying their hobby.”

As an aside, Randolph tells a story of a complaint he got from a golf course neighbor whose home adjoined the course. “She was used to the regular mowing we did, but now vegetation had grown up on the course near her house, and she was concerned about mice. I explained what we were doing for the prairie and the bobwhites. She said she enjoyed hearing them call from her porch every day, and if that was what it was about, then she was fine with it.”

