They’re back! Migratory fish return to Brandywine Creek after dam-removal starts

By JON HURDLE • MAY 1, 2020

The site of the former West Street dam on the Brandywine Creek at Wilmington; its removal last year has allowed many more migratory fish like the American shad to swim upstream toward their ancestral spawning grounds.
In January, contributor Jon Hurdle reported on how a series of dams along the Brandywine that date back some 200 years were being targeted for removal or modification.

The goal is to allow shad and more to return to their ancestral spawning grounds again for the first time in two centuries.

This week, Jon Hurdle returns to tell us there's evidence the effort is paying off.

The shad are back in the Brandywine Creek.

More than two centuries after settlers began to build dams across the creek to power their grain mills, the fish are making their way back into the creek where they were once so abundant that they were one of the most important food sources for early American communities.
In mid-April, an angler caught the first documented shad of the season in a stretch of the creek that is now open for migratory fish for the first time since the colonial era, thanks to the demolition last year of a dam at West Street, Wilmington.

The dam, built in 1906, and another a few yards downstream dating from 1740, previously blocked the upstream passage of fish including American and Hickory shad, herring and alewives when they attempted to return to their ancestral spawning grounds in the Pennsylvania section of the creek some 25 miles away.

The removal of the West Street dam is the first stage in an ambitious project to demolish or modify all 11 dams in the Delaware section of the creek and give the fish renewed access to their spawning grounds that their species have not known for many generations.

Advocates for the project have long predicted that the fish would start to come back as soon as the physical barriers to their migration were removed, and the appearance of the first shad in this spring’s ‘run’, just months after the removal of the furthest-downstream structure, has vindicated them.

“It’s the first time that they have been able to swim unhindered by a dam,” said Dr. Jerry Kauffman, director of the University of Delaware’s Water Resources Center, and a leading advocate for the dam-removal campaign. “I was really excited when I saw the photograph that the American shad are in the Brandywine above the old dam because that’s a sign of things to come.”

Kauffman is part of Brandywine Shad 2020, a nonprofit headed by UD, the Hagley Museum & Library, and the Brandywine Conservancy, and which plans to remove three of the dams this year, depending on funding from federal and state governments, and private donors.

The three dams scheduled for removal this year have already been partly demolished by natural forces; others are historic structures that cannot be removed but will be modified to allow fish to pass upstream.

The campaigners argue that removing the dams or modifying them to allow fish to swim upstream will not only bring the fish back but attract other wildlife like ospreys and bald eagles; reduce the risk of flooding behind the dams; lower water temperatures by reducing the number of shallow, slow-flowing sections, and improve opportunities for boaters and nature lovers.

For Dave Redgraves, an angler, the removal of the West Street dam has quickly increased the number of shad and other migratory fish that he’s been able to catch in the creek. Standing on the bank near the site of the demolished dam on April 23, Redgraves said he had caught 12 American shad already that morning.

Although a handful of shad swam in that section of the creek before the dam was removed, they had been placed there by anglers, or in a few cases were strong enough to get past the dam. But they were much less numerous than the migratory fish that are now swimming upstream of the old dam site, several anglers said.

“Back when the dam was here, I’d catch a few but I’ve definitely seen a lot more since the dam was taken out,” said Redgraves, 31, a member of the natural resources police with Delaware State Parks, having a day off work. “It’s better for the environment if they can make their natural runs. It’s better for the river.”

The fishes’ quick return to the creek mirrors the experience in some other waterways, such as the White Clay Creek near Newark where a revolutionary-era dam was removed in 2014.
Kevin Weyl, another angler, said he too had seen many more shad since the West Street dam came down.

“I’ve been fishing here for about 14 years, and since that dam has been gone, we’ve seen shad the furthest up I’ve ever seen in my life – both American and Hickory,” he said.

“This year, they’ve been coming up in big numbers; it’s not just one or two fish,” Weyl said. “Their instinct is to go far upstream to spawn, and they’ve been blocked by that dam for centuries.”

Weyl, 31, welcomed the new opportunity to fish for shad but was only doing so on a weekday because he was laid off from his job with a landscaping company about a month earlier as the company shut down in the Covid-19 pandemic.

He had mixed feelings about having extra fishing time because he’s not getting paid, and because many other suddenly time-rich anglers are flocking to the Brandywine to take advantage of the new fish influx, and that’s creating new competition between them.

“I’ve never seen as many people fish here in my life,” Weyl said. “Now this entire stretch is filled with anglers, left and right, and it’s putting pressure on the fish.”

And however much he likes fishing, “unfortunately, it can’t pay the bills.”

It looks like the new fish influx is already attracting other wildlife, as predicted by the campaigners. Michael Popovich, another angler, said he has seen more ospreys and bald eagles flying over the creek since the anadromous fish – which spend most of their lives at sea but spawn in fresh water – have been able to swim further upstream.

The birds “are just following the fish,” said Popovich, 41, a farm manager at the University of Delaware. “This is easy pickings in the shallow water, versus the open water on the bay.”

With the dam removal, the fishing has definitely got better, he said. “The anadromous species are able to move up unimpeded and get to better spawning areas. You are increasing the amount of forage fish for the bigger fish. We couldn’t be more pleased to see the dams removed.”

The dam-removal program has continued despite the pandemic-related shutdowns because technicians doing preparatory work can practice social distancing, said Jim Shanahan, a co-founder of Brandywine Shad 2020. He hopes that when the group is ready to remove the dams in the fall, the pandemic restrictions will have been lifted.

The campaign is waiting to hear whether it will get $490,000 from the federally funded National Fish & Wildlife Foundation. The Brandywine group is hoping that will then be matched by the State of Delaware, through a bond issue. Both grants would enable the group to remove all three of dams, as scheduled this year, Shanahan said.

While the group is cautiously optimistic it will get the government grants, it is less confident that private money will be available for dam removal because so many foundation dollars are currently going to pandemic-related causes.
"They are writing checks like crazy so it’s going to be problematic to get it from the private foundations, I think," Shanahan said.

Whenever funding allows, removal of the dams will help the recovery of the shad that were decimated in the 20th century by overfishing, poor water quality and an inability to reach their spawning grounds, Kauffman said. The first two threats have been addressed by regulation and the federal Clean Water Act of 1972, and it now remains for the third challenge to be solved by dam removal, a process that is taking place in many other areas of the United States.

"We’re seeing shad that weren’t born here; they’re coming to a habitat that is like where they were born," said Kauffman, as an osprey flew over the creek. "They will spawn and their progeny will come back and spawn in four or five years, and their offspring will be born in the Brandywine."