VIRGINIA CHAPTER of the AMERICAN FISHERIES SOCIETY

Inland Fisheries and Aquatic Resources of Virginia

Organized in 1990

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Jordan's Point Dam Removal

In collaboration with its project partners, the City of Lexington and the U.S. Fish and Wildlife Service, the Department of Game and Inland Fisheries recently completed the partial removal of Jordan's Point Dam (pictured below) on the Maury River in Lexington, Virginia. After years of planning and months of waiting for the river to reach acceptably low flows, the compromised structure has successfully been removed. The Maury River now flows freely through the previously impounded 1.2-mile reach, including Jordan's Point Park.

Improved public safety, restoration to riverine habitat and geomorphology, and removal of a fish barrier were the goals of this project. The Maury River supports a wide diversity of fish life, although diadromous species are conspicuously absent from its waters. Important native species such as Bluehead Chub, River Chub, Fallfish, White Sucker, Torrent Sucker, Longfin Darter and Redbreast Sunfish will benefit from a re-connected river. Radio-tagged feral Smallmouth Bass, a naturalized species to the Maury River, have been followed by students from Washington and Lee University before the dam was removed. This study will continue for at least another year or more.

Historically, the Maury River has supported sensitive mussel fauna such as the James Spinymussel, Dwarf Wedgemussel, and Green Floater. These three species have largely been extirpated from the Maury River. More recently, live Eastern Elliptio were identified near Glasgow and, in 2016, several Atlantic Spike mussels were found in the vicinity of Jordan's Point Dam. Dam removal will improve shellfish habitat over time and allow free movement of finfish associates to help with natural translocation. It will also restore natural patterns of sediment flux in this section of the river, benefiting benthic habitats and communities both upstream and downstream of the dam location. (continue on the next page)

The Virginia Chapter of the American Fisheries Society *is a subunit of the American Fisheries Society. The chapter was established in 1990 to provide fisheries professionals in Virginia with increased access to AFS; encourage the exchange of information among fisheries and other aquatic resource professionals; provide a forum for the discussion, debate, and resolution of aquatic resource issues within Virginia; and serve the Commonwealth by providing expert scientific knowledge to allow for informed decisions concerning the use and development of the state's natural resources.* The Chapter website can be found at http://sdafs.org/vcafs/

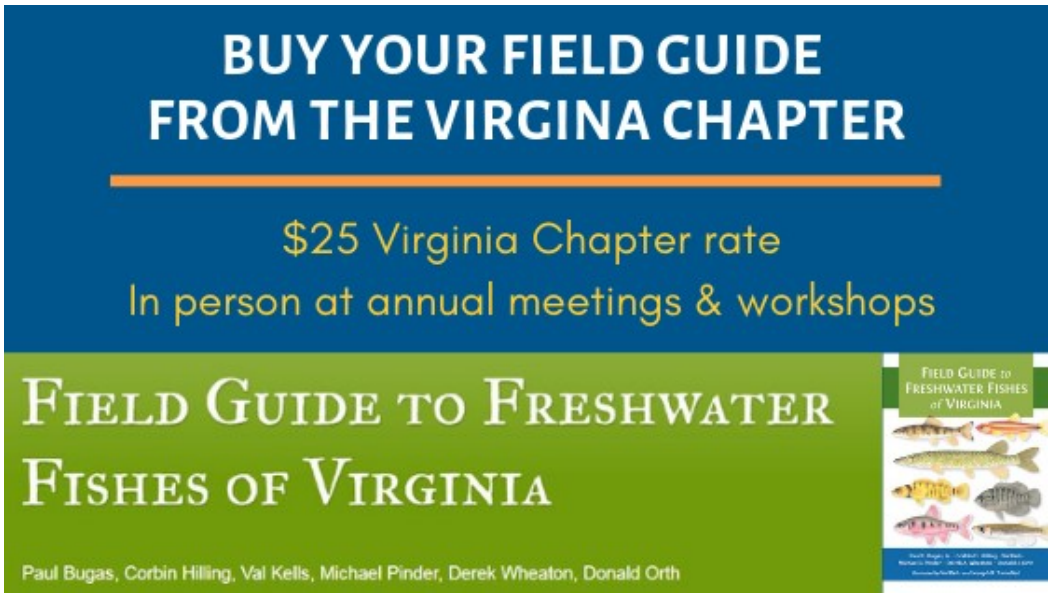
In April, preparation work began with the installation of construction fencing and an access road. Eight concrete piers that no longer supported a railroad bridge were removed from mid-channel and a temporary, rock causeway was constructed to allow heavy equipment to approach the dam. Also in April, as mitigation for historic resource impacts, two millstones were recovered from the downstream pool for interpretive use: one has been placed in front of the Miller's House Museum at the entrance to Jordan's Point Park, and one is destined for the Frontier Culture Museum in Staunton.

High water inhibited access to the dam through much of May, but ideal working conditions at the end of the month allowed the removal of the 180 feet wide, 10 feet tall structure to take place. Most of the material from the early 1900's concrete mill dam was removed from the river channel and disposed of off-site at a concrete recycling facility. A portion of the dam on each bank remains for historic interpretation, as does the defunct pool-and-weir fish ladder.

A river-wide wooden crib dam was exposed immediately upstream during removal of the concrete dam. The architectural historians who were on-site during the entire project intensively documented this structure prior to and during its removal, and numerous timbers were salvaged for potential interpretive use by local historical organizations.

This effort has returned the river to a free-flowing system with diverse pool and riffle habitat, opened upstream aquatic organism passage, removed the mandatory portage for boaters, and improved public safety in City-owned Jordan's Point Park. In short order, the river will adjust to its renewed condition with vegetation re-establishing on the banks; insects, fish, and mussel communities will flourish and the public can safely enjoy the beauty of the river. **~Louise Finger and Paul Bugas**

Maury River from downstream after dam removal



Saying Goodbye…

Fred D. Leckie, Jr. – The "Tasmanian Devil" of Fisheries Administrators

"Hurricane Fred" Leckie blew into Virginia from West By God Virginia in 1990, and when a force of that magnitude hits, it leaves a mark. From 1990 until his retirement this past spring, Fred was the Assistant Chief of Fisheries and then the Grants Coordinator for the Virginia Dept. of Game and Inland Fisheries. I started my career with DGIF a few months prior to Fred, so I feel that I'm a reasonably reliable witness to the power that is Fred Leckie, Jr. (a.k.a. Lucky Ford, a.k.a. Jack Schmack, a.k.a. The Captain).

Fred grew up in Ohio and West Virginia, and I can only guess that, as a child, he was a holy terror. As a young man, Fred decided that going to college in Miami offered a higher entertainment value than going to war in Vietnam, so off he went to pursue a higher education at "The U". While there, he learned that fishing in the Keys was infinitely more enjoyable than attending class regularly, but he did manage to achieve his higher education goals (which did actually include graduating). Following a few meanders, Fred ended up in WV as their Federal Aid Coordinator, where he was one half of the infamous "Fred and Bernie Show", along with Bernie Dowler.

After several years with WVDNR, Fred packed up the family and took a job as our Assistant Chief of Fisheries in 1990. When he arrived, little did we know that a Force of Nature had descended upon us. You see, Fred is a "doer". One of those people with boundless energy and an extreme penchant for getting things done and making things happen. When Fred tackles something, it gets done. Not necessarily quietly, but it definitely gets done. One of the things I've observed over the years, is that you never quite realize just exactly how much Fred does until he's not there doing it any longer. I learned this when he moved from Asst. Chief to Grants Coordinator, and then learned it again when he retired.

Another thing that I learned over the years was just how much of an advocate Fred has been for all of us out in the boonies. One thing you always could count on was that if you needed Fred's support on anything, you would get it in spades (and lord help anyone who might be in the way). That aspect, probably more than anything (and there was a whole lot), was his greatest contribution to advancing fisheries and aquatic science management in Virginia. If any of us needed help, you could always count on Fred providing it in an extremely effective manner. Knowing that your administration has your back on every single issue is invaluable, and made us all much better biologists. I can't tell you how many conversations I've had with representatives from other agencies who'll say, "our administration would never let us do that," whereby my response has been "our administration (meaning Fred) *encourages* us to do that." Over the years we have tried a lot of crazy things (some of them even relatively successful) that would've never happened with someone other than Fred paving the way for us. As I noted earlier, Fred made us be better biologists.

Finally, I would be remiss if I neglected to mention just how much of a Force of Nature Fred actually is. He is not a shy and quiet person. You could always tell when someone was on the phone with Fred, because they'd just sit there quietly with the occasional "yeah" or "uh huh". When I would have to call Fred about something, I learned to write my question down before calling, otherwise I'd never get the chance to actually tell him why I had called. True story. If you wanted a short meeting, you didn't invite Fred. If you wanted a meeting where decisions actually got made, then you'd <u>better</u> invite Fred. I think I can safely speak for all the DGIF field staff when I say that we wish Hurricane Fred the very best retirement that anyone can possibly have (he's more than earned it), and that we all miss him very, very much.

~Scott Smith

Happy Retirement Paul Bugas

Paul Bugas is retiring September 30th after a distinguished, 44-year career with the Virginia Department of Game and Inland Fisheries. He served as a seasonal field technician, Assistant District Fisheries Biologist, District Fisheries Biologist and Regional Aquatics Manager in the Northwest region of the Commonwealth over the past four decades. Paul's fisheries management achievements are many. Some of the most noteworthy include, helping to complete the original Virginia Trout Stream Survey and developing VDGIF's Wild Trout Management Program, developing the fisheries resources in Lake Moomaw and the Jackson River Tailwater, developing recreational fishing opportunities at the Bath County Pump Storage Hydropower Facility, investigating fish health issues that impacted the Shenandoah and upper James River Watersheds, leading VDGIF's efforts with the DuPont mercury NRDA on the South River and South Fork Shenandoah River, supporting the removal of several obsolete dams, and creating many quality fishing opportunities for everyone.

He dedicated countless hours of service (pictured below) to NGOs in his region helping develop "citizen science" and water quality monitoring programs. Paul has also played a pivotal role in creating collaborative "partnerships" that have greatly benefited the aquatic environments and anglers of Virginia.

Paul was one of the founding members of the Virginia Chapter AFS. He served as the Chapter's first president (1990), going on to serve a second term. He has served on several Chapter committees over the years, with some of his most memorable contributions coming from his leadership of the Outreach Committee. Paul was instrumental in the creation of a Virginia Chapter AFS brochure used to recruit new members and inform the public about the Chapter's mission. He also led the charge in creating a "Fishes of Virginia" poster that was provided to schools and educators across the state. Paul participated in the AFS parent society's Hutton Scholar Program, mentoring three high school students in the mid 2000's. Most recently, Paul was a member of a team who developed and published "Field Guide to the Freshwater Fishes of Virginia."

The most remarkable "gift" that Paul has given to the profession is his mentorship of aspiring young fisheries biologists, many who have gone on to become outstanding aquatic resource professionals. He has touched so many lives in such a positive manner throughout his career.

We, fellow VCAFS members, wish Paul a happy retirement, and look forward to interacting with him at Chapter functions in the future. **~Steve Reeser**

Paul Bugas was a strong proponent of community outreach

Preliminary Results of a Hazel River Fish Survey

Sampling above the former Monumental Mills Dam site

Between June 18 and 20, 2019, the Virginia Department of Game and Inland Fisheries conducted a fish survey on the Hazel and Thornton rivers, Rappahannock Drainage, Culpeper County, Virginia. The purpose of the survey was to determine the impact of the removal of a low-head dam on fish species richness and distribution in a Piedmont stream. Monumental Mills Dam was built with hand-mortared field stone circa 1850 on the Hazel River and was modified circa 1930 (concrete crest added) to produce hydro-electricity. There had been a dam impeding fish movement at this site as early as 1816. The 150+ year old dam was removed in 2016 by the VDGIF in partnership with the USFWS to improve fish passage. Four years prior to its removal, the Department surveyed the fish assemblage on the Hazel River above and below the dam. We also surveyed fish on the Thornton River, which joins the Hazel River approximately 0.6 km downstream of the dam. Because the Thornton is about the same size as the Hazel, it served as an excellent undammed control for the study. In 2012, we collected 24 species in the Hazel above and 34 below the dam. During our resampling this year, we collected 28 species above and 34 below. The most notable finds above the dam were the first recorded observations of Sea Lamprey (*Petromyzon marinus*) and Channel Catfish (*Ictalurus punctatus*). As a reminder, Embrey Dam (1910) and the 1855 crib dam were removed from the Rappahannock River at Fredericksburg in 2004/5. We are still working up vouchered fish collections from the Thornton River to determine how species richness has changed. In addition to sampling fish in 2012, we surveyed physical habitat in the Hazel and Thornton rivers using the U.S. Forest Service basinwide visual estimation technique. Using the same methodology, we plan on resampling these rivers to determine the effect of dam removal on habitat and how it is associated with changes in species richness and distribution. **~Mike Pinder and Alan Weaver**

Sampling below the former dam site

Aquatic Plant Restoration

Aquatic plants play an important role in lakes and reservoirs. They provide valuable habitat for fish and wildlife, serve as a food source for wildlife and other aquatic organisms, reduce shoreline erosion, and improve aesthetics of a waterbody. Additionally, research suggests that establishing native plants can help preclude the invasion of nuisance aquatic plants like hydrilla *Hydrilla* verticillate and Eurasian Watermilfoil *Myriophyllum spicatum*. Therefore, when non-native plants have been eradicated, one way to help prevent their reestablishment is by planting native plants.

When compared to natural lakes, reservoirs and lakes often lack the seedbank for aquatic plants to occur naturally. Water level fluctuations, turbidity, and variable retention time can also reduce the presence of aquatic plants. Finally, the presence of herbivores (grass carp, muskrats, turtles, deer, etc.) further precludes aquatic plants. Fortunately, aquatic plant researchers have developed techniques that improve the chance of success in aquatic plant introduction programs.

Because propagules are often limited in lakes and reservoirs, one way to establish aquatic plants is by using founder colonies. Founder colonies are small colonies of aquatic plants established at various locations within a waterbody. Once established, founder colonies spread either by expansion from the founder colony or from colonization (formation of new colonies from fragments, seeds, etc.). Due to herbivory from a variety of species, founder colonies often must be protected (lower left photo). Coated, galvanized welded wire fencing (12 or 14 gauge) is an effective way to create exclosures to protect plants. In most instances, 2-inch by 4-inch mesh is sufficient at excluding most common grazers. The shape of the exclosure is less important and can be circular or rectangular. Exclosures are then secured to the substrate using rebar or t-posts.

Site selection is critical when establishing founder colonies. Sites should be shallow, well protected from wind and wave action with gradual slopes (< 10%). Substrate is less critical as new plantings seem to thrive in a variety of types. However, rocky substrates may preclude roots from becoming established.

Managers should seek to establish a diverse native plant community that consists of submergent, floating, and emergent species. This will increase the likelihood for long-term establishment. Within an exclosure, only one species should be planted. Diverse communities also provide the greatest water quality and habitat benefits. Species should be selected based on known abiotic conditions as well as anticipated stakeholder benefits.

Native plant establishment generally involves a 3-phase process. Phase-1 involves planting and monitoring over a full growing season. During the second growing season, those species that performed best should receive additional plantings. Therefore, phase-2 should result in the establishment of founder colonies of several species. During phase-3, plants should begin to expand outside the protective exclosures (lower right photo). Additional species may also be desirable to ensure maximum diversity.

~Vic DiCenzo, PhD; Solitude Lake Management

VA Tech Welcomes Two New Fish and Wildlife Conservation Faculty Members

Francesco Ferretti

https://fishwild.vt.edu/faculty/ferretti.html

Holly Kindsvater

https://fishwild.vt.edu/faculty/kindsvater.html

OFWIM Annual Conference: 6-10 October 2019

National Conservation Training Center, Shepherdstown, WV

The Organization of Fish and Wildlife Information Managers (OFWIM) is a professional society that seeks to encourage the development of innovative solutions for managing and using data in support of natural resources management and conservation. Our membership is made up of state, federal, and non-profit fish and wildlife information managers from all backgrounds and from all over the country (and Canada!). Several of our members are fisheries biologists and members of AFS. OFWIM supports undergraduate and graduate students conducting research that emphasizes fish and wildlife information management and/or geographic information systems. Student scholarships and travel grants for professionals are available.