

# GUARDIANS

## NEWSLETTER

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## AUTUMN OLIVE (*Elaeagnus umbellata*)

By: James Nedrow

Autumn olive (*Elaeagnus umbellata*) is a nuisance plant that was introduced into the United States around 1830. It is native to countries in Asia. It was widely planted as an ornamental shrub, and as a fast growing cover for wildlife habitat. Later, it was a cheap and dirty plant to cover old coal strip mine jobs. The reason is financial, as it costs less to plant than our native locust trees.

Autumn olive is found in most of the states east of the Mississippi River. It grows on any type of land, whether it be fields or disturbed land. This plant can grow in some of the poorest soil you can find; hence, it does very well on abandoned coal fields. Drought resistant and fast growth results in a plant that can out-compete native plants. Its dense growth creates shade that interferes with the natural grasses. Due to its nitrogen-fixing root nodules, which allow Autumn olive to tolerate the worst of soil conditions, it is a vigorous growing nuisance.

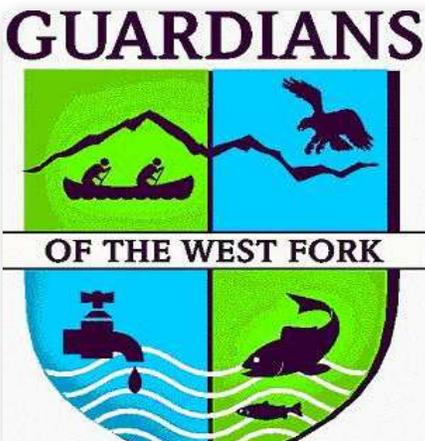
While it is a shrub, it can grow to a height of 20 feet. The leaves are silvery with a rusty looking bottom. Any flowers it has are mature in June through July and are a pale yellow and very small. The thorny leafy branches create a heavy shade which affects native plants that require direct sunlight.

Birds spread the seeds with some spreading by its root system. The primary advancement of autumn olive has been by mine reclamation efforts in the 1950's.

Prevention and control is now recommended to stop the spread of this nuisance plant. Young plants can be pulled up ensuring that all of the roots are removed. Cutting of larger plants down to ground-level is a temporary step that must be applied yearly. Autumn olive will vigorously re-sprout after cutting. The herbicides; glyphosate and triclopyr are effective. This not recommended because it leads to run-off into the watershed, contaminating the local streams.



Photo collection: autumn olive, a non-native plant used in coal field restoration.



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## Float Trip on the West Fork River

By: Jeff Reichel

The best way to fully appreciate the beauty and significance of the West Fork River is to spend time leisurely floating down it. It would give you the best opportunity to get up close and personal with the wild life, aquatic environment and botanical beauty found along the West Fork.

By spending time on the river, you will also get an idea what is needed to make it even better. At times, it is common to see some trash floating on the river and a float trip can give us an impression of how much work would be involved in a clean-up.

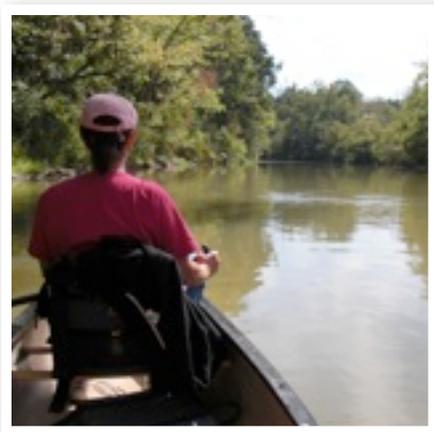
It will also be possible, during a float trip, to identify possible access points, areas of historical significance, and other points of interest along the way.

For these reasons, I would like to propose to the membership of the GFWW, an informal float trip to take place sometime this Summer.

The route would be the stretch of river between Good hope and West Milford. This is about 5 miles and will take 2 ½ to 3 hours to complete. We would launch on a Saturday, somewhere along the river and take out at another convenient spot.

There would be no formal organization to this event, and you

are encouraged to bring your own canoes, equipment, and food. We offer no guarantees. Just a group of GFWW members getting together for a leisurely trip down the river. At this point, no time or place has been established. If you are interested, please contact Jeff Reichel at [reichel2@consolidated.com](mailto:reichel2@consolidated.com). Once I get an idea of how many are interested, we will set something up.



*Experience the river firsthand with the Guardians of the West Fork!*



### GFWW Mission Statement

*Guardians of the West Fork Watershed is a volunteer 501(c)(3) organization dedicated to the preservation and improvement of the ecological integrity of the West Fork River, its tributaries, and its watershed. It will monitor and assist agencies in monitoring biological, physical, chemical, and cultural characteristics of the watershed to identify sources of degradation and suggest their elimination. It will publicize the status of the watershed and encourage education and recreational enjoyment of the watershed. It will seek wide membership and outside funding to support its activities.*



*Sailing down the scenic West Fork River*

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## West Virginia Vegetable Crop Farming

By: S. Thomas Bond

David Beard, writing for the Dominion Post, the Morgantown newspaper, tells us Delegate Larry Williams and others are looking to encourage farming in West Virginia. This seems like a good idea to prepare for a world with 9 billion people in 30 years, an increase of 22% from today's 7 billion.

Where will so much more food come from? Three-fourths of the earth's surface is ocean, one-fourth is dry land. Half of that is polar, desert, mountains, swamp or otherwise unsuitable for cultivation, leaving one-eighth. Three-fourths of that is too poor, or covered by "development" so that it can not be used for crops, leaving one-thirty second of the earth's surface to grow food. And in the United States alone, one million acres of that is disappearing under development each year.

<http://www.farmland.org/Flash/appleEarth.html>

Land degradation is most severe in South America and Africa, but it is a problem, too. At present, the average item on one's plate travels something like 1600 miles between the point where it is produced and the point where it is consumed. U.S. wheat for human consumption is mostly grown in the Upper Midwest, rice in the humid South, fine crops in California and Mexico in the winter, bananas in Central America, seafood all over the world, and so on. I've heard it said we need a second green revolution like the one attributed to

Norman Borlaug, which occurred in the 40's to 60's involving plant breeding and new mechanical technologies.

<http://geography.about.com/od/globalproblemsandissues/a/greenrevolution.htm>

Many people are unaware that several crops are in a race with plant diseases. Wheat varieties are constantly being changed to keep ahead of wheat rust, a fungus which evolves rapidly. Bananas, although not a temperate zone crop, are susceptible to a fungus and must be changed to new varieties on a twenty year time scale.

We have mostly grazing farms in West Virginia, due to problems using mechanical methods to grow crops on hill sides, but our soil is adequate, the climate is O.K. and there is good rainfall - 44 inches a year in the West Fork Valley.

<http://www.weatherwise.org/Archives/Back%20Issues/2011/March-April%202011/west-virginia-full.html>

The technology for growing vegetables is mostly forgotten, since few families even keep a garden now, in contrast to the practice fifty years ago. Doubtless they have changed a lot, too. It's a great idea, if people can get enough for the produce to justify the labor. It reduces transportation, improves the trust and understanding between farmer and consumer and increases the food base. Clubs which contract to deliver vegetables to the consumer weakly in season are springing up all over the U. S.

But, there is another problem which will be a bigger problem years down the road if the other economic project of the legislature works out as it's proponents wish. That's shale drilling.

Are people going to want to buy fruit and veggies, and beef or lamb, when they

know it is coming from an area where there is water pollution or air pollution, and where mini-brownfields are every mile or so? From land that is subsoil, depleted in organic carbon and nitrogen and so full of rock that heavy trucks can drive on it in all weather? There are many stories about dead and infertile cattle and horses where fracking takes place, along with aborted calves and lambs. These come from veterinarians, too, experienced professional people.

The shale drilling project will be exhausted in a few decades, about the time the world population reaches nine billion, if not before.

<http://shalebubble.org/drill-baby-drill/>

How will the population be fed then? And the demand for food? Will the area lost to Shale contamination be needed? Will it still be a good idea to move food around so much?

It appears growing food - or timber or fiber for human use, will be inhibited by the land degradation of fracking. Is Del. Larry Williams' good idea a practical one? What do you think?

## Water Trail Meeting

By: John L. Stenger

On Friday, May 17, the Guardians moved our regular monthly meeting to the West Milford city building to host a special open meeting devoted to the establishment of sections of the West Fork as a designated Water Trail. The West Virginia Department of Environmental Protection (DEP), in cooperation with the West Virginia Department of Transportation and the National Park Service, is seeking organizations such as our Guardians

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watershed group to take a primary role in the development and maintenance of water trails on rivers throughout the state.

The Water Trails are recreational projects designed to increase awareness, appreciation, and utilization of our rivers and streams. Designated Water Trails are relatively long sections of smooth, flat water suitable for scenic, leisurely trips by the increasingly popular paddle boat sport participants. This includes canoes, kayaks, and row boats. The long pools of flat water behind the West Fork River dams provide ideal conditions for Water Trail development.

To obtain official designation, the primary sponsor must obtain broad community support and cooperation to develop points along the Water Trail affording parking and easy access to the water. Maps of the trail showing historical, natural, and scenic points of interest must be developed and made available. With official designation, our river becomes a more widely recognized and utilized recreational asset and the West Fork becomes more appreciated and valued.

Jeff Reichel, one of our knowledgeable and talented and well-traveled members, led the meeting. Jeff presented a very interesting slide show and power point presentation depicting both the potential and beauty of the West Fork River, and an overview of what other small groups have been able to accomplish with Water Trails on other rivers, both in West Virginia and nationwide.

Water Trails already developed have made a tremendous difference in the recreational enjoyment and utilization of the rivers. The Coal River here in West Virginia and the Kaw River in Kansas were two of the examples Jeff covered in his presentation. Both projects were

started by small core groups dedicated to improvement of recreational opportunities for their communities.

Jeff stressed the overwhelming importance of maintaining the current dams on the river to preserve and protect the treasured recreational resources provided by the pools of deep water behind each dam. The success of Water Trails in increasing use and appreciation of these other rivers is very encouraging to our efforts and plans for the West Fork. He also stressed that we need to keep up the political pressure by contacting elected officials

In attendance were about 30 people, including the Mayor, Nancy Gall, and a councilman, Frank Nuzum, from the town of West Milford. Two Harrison county commissioners were also in attendance, Bernie Fazzini, and Ron Watson. Both stood up in front of the assembled Guardians of the West Fork and made a few encouraging remarks, expressing their support for our efforts to preserve the dams. These commissioners have been wonderful in their efforts to help us in the past and are committed to assist in the future. Designation of the West Fork as a Water Trail gives them even more reason to help us save the dams.

After the remarks by the commissioners, Martin Christ of the DEP made a few comments encouraging us to proceed with the Water Trail project, and stressing that the more people we can get out on the river, the more the river will be valued and protected. John Stenger, a member of the Guardians, long active in the efforts to save the dams, spoke of the need for a few people to step forward and help with the task of obtaining official Water Trail designation. He also mentioned the work of our attorney,

Greg Hinton, in finding precedent for the possibility of the county using legal action through eminent domain to save the dams.

Many of those in attendance were Guardian members, and we were able to sign up a few new members after the meeting. We had an informal question and answer period with many in attendance participating, and then our Guardians President, John Eleyette, made a few comments about the need to keep working and keep up the pressure if we want to preserve the wonderful West Fork River.

Over all, the meeting was a good first step in the effort to obtain designation as an official Water Trail. We need help with this. Any volunteers?

## Guardians of the West Fork Receive \$2,900 Grant

West Virginia University's Water Research Institute awarded the Guardians \$2,900 in grant funding to support citizen water quality monitoring, as part of the 3 Rivers QUEST program. Funds were awarded to ten different watershed organizations across the state. For more information, see the Water Research Institute's official press release on Page 5.



*GFWF President, John Eleyette, accepting a check from the Water Research Institute.*

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**PRESS RELEASE****West Virginia Water Research Institute Provides \$40,000 in Grant Funding to Local Watershed Organizations**

The West Virginia Water Research Institute, a program of the National Research Center for Coal and Energy at West Virginia University, awarded a total of \$40,000 to local watershed organizations through its 3 Rivers QUEST (Quality Useful Environmental Study Teams) May 6.

The funding will help support volunteer water quality monitoring and data collection in headwater streams and smaller tributaries of the Monongahela River as part of the larger regional monitoring program.

In total, 10 watershed groups received 3 Rivers QUEST grant funds. The groups include Friends of Blackwater, Friends of the Cheat, Friends of Deckers Creek, Friends of Deep Creek Lake, Guardians of the West Fork, Harry Enstrom Chapter of the Izaak Walton League of America, Peters Creek Watershed Association, Save the Tygart Watershed Association, Whiteday Creek Watershed Association and the Youghiogheny River Watershed Association. The check presentation took place at the NRCCE building on WVU's Evansdale campus.

"The idea that we can move this whole process up into the headwaters, with your help, will be an extremely exciting interface between science and policy but at the grassroots level," said Paul Ziemkiewicz, director of the West Virginia Water Research Institute. Ziemkiewicz gave an informal presentation to attendees on the status of monitoring efforts in the Monongahela River Basin, stressing the importance of volunteer monitoring. "It can really influence the world around you, which is what I think we are all trying to do."

The West Virginia Water Research Institute began the strategic QUEST program in July 2009 after concerns arose over high concentrations of total dissolved solids in the Monongahela River that exceeded the U.S. Environmental Protection Agency's secondary drinking water standard. Since then, Water Research staff has conducted sampling and monitoring at 17 locations throughout the Monongahela River Basin every two weeks.

After successful implementation of the original monitoring program, a \$700,000 grant from the Colcom Foundation – a Pittsburgh-based private foundation dedicated

to fostering a sustainable environment – allowed for a geographic expansion of the QUEST program to include the Allegheny and upper Ohio River basins. The 3 Rivers QUEST program, administered and managed by the Water Research Institute, now includes regional research partners at Duquesne University (Southern Allegheny River Region), Wheeling Jesuit University (Upper Ohio River Region), and the Iron Furnace Chapter of Trout Unlimited (Northern Allegheny River Region).

In total, \$140,000 in funding (\$30,000-\$40,000 in each QUEST region) from the 3 Rivers QUEST program will support more than 350 volunteers and help them collect field, data logger and/or laboratory analysis from more than 300 sites within the Upper Ohio River Basin.

Founded in 1967, the Water Research Institute is funded through the U.S. Geological Survey. It serves as a statewide vehicle for performing research related to water issues.

The primary mission of the Colcom Foundation is to foster a sustainable environment to ensure quality of life for all Americans by addressing major causes and consequences of overpopulation and its adverse effects on natural resources. Regionally, the Foundation supports conservation, environmental projects and cultural assets.

The grant from the Colcom Foundation was made in conjunction with *A State of Minds: The Campaign for West Virginia's University*. The \$750 million comprehensive campaign being conducted by the WVU Foundation on behalf of the University runs through December 2015.

**-WVU-**

gw/05/14/13

CONTACT: Glenn Waldron, WV Water Research Institute  
304.293.7085; [Glenn.Waldron@mail.wvu.edu](mailto:Glenn.Waldron@mail.wvu.edu)



*GWFW President, John Eleyette, accepting a check from the Water Research Institute for the 3 Rivers QUEST program, alongside representatives from other watershed organizations.*

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## Impact of Musky Predation on Smallmouth Bass

By: Andrea Varrato

A 2004 study, Predatory impact of muskellunge on New River, Virginia, smallmouth bass, conducted by Brenden et al.<sup>1</sup> offers valuable insight into aquatic ecosystem management at the community level, as well as management of musky stocked waters.

Researchers examined the stomach contents of 171 muskies of various lengths (358 to 1270 mm) to determine the central components of their diets. Muskies were collected by electrofishing in the lower portion of the New River.

Of the 171 muskies collected, over half (55%) of all stomachs contained food. Smallmouth bass comprised only 4% of total stomach contents, suggesting a relatively low level of musky predation on

smallmouth bass, though the percentage of stomach contents containing smallmouth bass increased as musky size increased.

Cyprinids and catostomids comprised the majority of musky diets, with cyprinid predation especially common in muskies smaller than 800 mm. Muskies larger than 900 mm primarily preyed on catostomids, while muskies in the 800-899 mm range had diets similar to both the large and small ranges.

Muskies are stocked in the New River as fingerlings, so a thorough understanding of musky predation on smallmouth bass is beneficial to the overall management of the river. Although this study focused on smallmouth bass, researchers suggest examining the impact of musky predation on a variety of aquatic species to facilitate ecosystem management at a community level. This study could be used by local natural resource managers to develop a plan for predation-based, rather than habitat-based, musky stocking. To access

the full text of this article, see the link in the *Related Links* section of our website, [www.guardiansofthewestfork.com/Related\\_Links.html](http://www.guardiansofthewestfork.com/Related_Links.html).

<sup>1</sup>Brenden, T.O., Hallerman, E.M., Murphy, B.R. Predatory impact of muskellunge on New River, Virginia, smallmouth bass. *Proc. Annu. Conf. Southeast. Assoc. Fish and Wildl. Agencies* 58:12-22.

For more information about the Guardians, check out our website

[www.guardiansofthewestfork.com](http://www.guardiansofthewestfork.com)

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 If you would like to join our organization and receive a copy of our quarterly newsletter, send \$5 per calendar year to one of the officers listed below. To receive a free electronic copy of our newsletter, email John Eleyette at [JMELEYETTE@rocketmail.com](mailto:JMELEYETTE@rocketmail.com)

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