

James Madison, Riverheads Students Meet Va. Governor and Secretary of Natural Resources



Students and advisors from the Students for Environmental Action (SEA) club at James Madison High School in Vienna and students from Riverheads High School (Staunton) met with Virginia Governor Terry McAuliffe in May to brief state officials on the students' environmental efforts.

Members of the Students for Environmental Action (SEA) club at James Madison High School in Vienna and students from Riverheads High School (Staunton) June 27 met Virginia Governor Terry McAuliffe and Secretary of Natural Resources Molly J. Ward to brief the officials about their respective environmental efforts. SEA briefed the DNR Secretary on their field efforts to identify potential streams for

introducing brook trout and the Riverheads students' discussed their planning and restoration work on several Augusta County streams.

The schools were congratulated for their pioneering endeavors and encouraged to continue expanding their field science efforts. SEA's efforts outside of the classroom are exactly the experiences the Governor said he was hoping to generate when he signed Executive Order 42 –

Establishing the Virginia Environmental Literacy Challenge.

This year the SEA Club's Stream Team is looking forward to expanding their methodology to new schools around the state. They will continue to work with Riverheads High School and perhaps plan a training retreat for the two schools.

Streamside

George Paine asks: Why are trees important in maintaining trout habitat? I've learned from trying to explain to kids about bugs that leaves are where it all starts. Also, park biologists explained to me that when shocking streams they find more fish under trees, and that is most likely due to bugs dropping into the water.

FishDr: Little attention is given to why forested watersheds provide ideal conditions for sustaining trout populations. To address the question thoroughly would take a huge book of information so I'll attempt to touch on a few main points.

More than 95% of the landmass east of the Mississippi River was forested when the first Europeans started settling along the east coast. Furthermore, the dominant tree species in the brook trout's southern

range was the American chestnut, an outrageously gargantuan tree species. Through centuries following those first settlements, we've seen vast fluctuations in forest coverage throughout the east. They're actually more trees covering our eastern landscapes now compared with 100 years ago. That's why we should always remember that forest products come from renewable resources and humans have the ability to directly impact how much forested land cover there will be in any eastern geographical area.

We often hear of the benefits shading trees in riparian zones (areas right next to surface waters) provide. Shading can lower surface water temperatures as much as 10 degrees Fahrenheit. The additional benefits that forests provide for trout receive less recognition but are almost equally important for sustaining trout populations. The one George mentions—providing a food source when bugs drop off of trees into the

water—has also been scientifically documented. One researcher claims that most summer time energy obtained by trout in areas of West Virginia originates from terrestrial, not aquatic, insects. The litter from fallen leaves and stems eventually ends up in the creeks, providing a food source for the aquatic insects in those systems. Even fallen trees themselves can create pooling areas for trout.

One little known attribute that trees provide is the ability to open up small cracks in the soil where precipitation can percolate through the soil, thereby diminishing the threat of flooding while also recharging the ground water. This is one of the main reasons humans should not develop wetlands. Along those same lines, the root systems anchor soil, preventing erosion. High white-tailed deer densities will diminish underbrush in forested areas. This may expose topsoil to the elements during extreme weather

events, releasing sediment into nearby streams. Excess sediment in trout streams is a significant silent killer within the field of aquatic ecology.

These are just a few of the important benefits forests provide, although the total benefits may not be fully realized at this time. Consider some of the severe storms we've experienced over the last five years. Wouldn't you think it would be better for trout streams if rain is pounding on leaves and the sides of trees instead of the ground or hot, hard pavement? Similarly, a rapid snowmelt would be better managed in a maze of trees with a blanket of fallen leaf mulch. Extreme daily temperatures would be better moderated under thick vegetation. Additional points may be more obvious once you really put your own thoughts to it.

If you have any questions you'd like to ask the Fish Doctor, please e-mail me at: fishdr@netzero.net