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## **BARK Goes Out on a Limb to Bring Back the Trees**

Jeremy Scherf, Service Forester, ODNR Division of Forestry & BARK Member

Back in 2003, a woman came into my office wanting to know how we could get the coal companies strip mining around Barnesville to plant more trees. I honestly laughed at the idea because I really didn't think it would happen. Marie Bundy was insistent that we could work with the coal companies and not against them for the greater good of reforesting these mined sites.

I talked with Marie in detail about the problems that current reclamation methods pose towards tree seedlings' survival. These include soil compaction, lack of moisture, heavy grass competition, deer and rodent predation and here in Belmont County, high soil pH. She went on her way and I figured that would be the end of it.

A few weeks later she returned with a promise from Oxford Coal Co. LLC to provide us a planting site, money for trees, and other resources we may need. She had already developed a plan for what she wanted to do. I then realized that I better get involved because this could be a great project for the community.

Barnesville has a long history of mining, and of community involvement. We knew that residents would be supportive of something as worthwhile as planting trees, especially if we worked with an industry that has provided so many jobs to the community.

We sat down with a few other area people who Marie knew wanted to help out, and BARK, the Barnesville Area Reforestation Kommittee, was formed. On a beautiful spring day in 2004, more than 175 people planted seedlings on a recently reclaimed site. Everyone received a free t-shirt with the BARK logo and a hot meal provided by the Barnesville Kiwanis. We borrowed tree planting bars from the ODNR Division of Forestry and Barkcamp State Park, and even Buckeye Steel jumped on board and made some planting bars for us.

This process continued for the next two years, with each spring bringing 4-5 acres of trees being planted by hundreds of volunteers dressed in BARK shirts. But I wanted more. We were seeing success with our tree plantings, but their growth was severely hampered due to the soil compaction and weed competition. Since our planting sites were still not released from their reclamation bond, we were not allowed to kill any vegetation in the planting site. The trees were growing slowly, so they were much more susceptible to damage from deer, mice and voles.

It was at this point that I heard about the Appalachian Regional Reforestation Initiative (ARRI) and met Jeff Emmons of the ODNR Division of Mineral Resources Management (DMRM), and Mike Hiscar from the federal Office of Surface Mining (OSM). These reclamation experts told me about a new technique of mining reclamation that promoted uncompacted soil.

The mining laws of the 1970's were intended to reduce soil runoff, prevent acid mine drainage, and restore the land to a condition capable of supporting pre-mining land use. Today, in the typical mining process, the timber is clearcut, stumps are dug out and buried in a pit (along with the attached topsoil), and any remaining topsoil is set aside. The area is mined, returned to the approximate original contour, and then the topsoil is smoothed out over the surface. Heavy equipment is run over and over the area to smooth it out and compact the soil to hold it in place. A heavy grass cover is then planted to also hold the soil in place. This is necessary since the soil is heavily compacted and rainfall cannot penetrate the soil and soak in, so water mostly runs off.

The ARRI approach is different. It promotes saving as much topsoil as possible, and using all the woody debris that is such a beneficial part of the forest floor. It recommends clearcutting the timber, then bulldozing stumps, forest residue, and all the topsoil into a pile to be set aside. The mining is completed, ground returned to approximate original contour, and then the large pile of topsoil, woody debris, stumps, and thousands of native seeds that were in the forest floor are all dumped on the site in uncompacted piles. These piles are then planted to native hardwoods. A heavy grass cover is not needed because the soils act like a sponge to absorb water. No soil leaves the site due to erosion.

Research has shown that even smoothing these piles off with one pass of a dozer will compact the soil. Our research is also showing that the piles are settling out very well. Yes, it is what we call ugly reclamation, but the results are astonishing. Not only are the hardwoods that we are planting growing, but they are growing very quickly. I have seen trees that are barely 4 years old over 8 feet tall. On top of this, the thousands of volunteer trees, berries, shrubs, forbs, and wildflowers that become established are amazing. These do not show up on a compacted mine site. They are on this site because the seed remains in the soil that we use. The uncompacted nature of the soil and the lack of heavy grass cover allow them to grow.

BARK saw an opportunity to work with Mike and Jeff and they saw an opportunity to work with us. Together with Oxford Coal Company LLC, one of the first sites in Ohio was reclaimed using the end dump method promoted by the ARRI, and in 2007, 4000 trees were planted. In 2008, Oxford received an Excellence in Reforestation Award from the Office of Surface Mining for their efforts.

This project has continued every year since. We average 200 people for the annual plantings. Many children come from the local Olney Friends School, area Boy Scouts and Girl Scouts, and some people bring their entire family. This project could not be done without the efforts of Oxford Coal Company LLC, Belmont Soil and Water Conservation District, Warren Township Trustee Jim Gear, South Central Power, the Ohio Chapter of

the National Wild Turkey Federation, Buckeye Buckmasters, Barnesville Kiwanis, Ohio CAT, Buckeye Steel, ODNR-DMRM, OSM, Barnesville Fire Department, the American Chestnut Foundation, the many businesses in the Barnesville area and the citizens of Barnesville.

In 2006, BARK was recognized by the Barnesville Chamber of Commerce as an Outstanding Community Organization. In 2009, BARK received an Excellence in Reforestation Award from the Office of Surface Mining. We have also been fortunate enough to help introduce the new disease resistant strains of the American chestnut on these sites (*see the article Reforesting Ohio Using a Historical Legend*).

We learn more every step of the way about how to lay out the piles, how to plant the trees on the piles, and which species do well. More importantly, each year that passes we can see living proof that it works. We can see the effort of this community spread from one woman's idea, into over 30,000 trees growing in the ground that would not have otherwise been there.

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*All are invited to help with future BARK conservation efforts. Contact Jeremy at 740. 439. 9079 for the spring 2012 planting date.*