**Forest Seminar Series: Introduction to Working Buffers: The Buffers You Can Eat!**

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**Speaker Contact Information:**

**Cathryn Pugh**

Forestry and Wildlife Educator, Centre County, PA

Penn State Extension

cathrynpugh@psu.edu

**Travis Wingard**

Master Watershed Steward Coordinator, PA Wilds Region

Penn State Extension

Tww5160@psu.edu

**Robbie Coville**

Ecosystem Products and Markets Specialist

PA Department of Conservation and Natural Resources, Bureau of Forestry

rcoville@pa.gov

**Additional Resources:**

*General references and more information on working buffers*

* Local grower associations, innovative farmers and craftspeople, extension offices, and conservation districts can provide localized, expert advice and maybe also direct support. **To connect more with agroforestry practitioners and service providers in PA, please respond to & share this interest survey for a PA Agroforestry Peer Network:**[**http://bit.ly/PAAPNsurvey**](https://nam10.safelinks.protection.outlook.com/?url=http%3A%2F%2Fbit.ly%2FPAAPNsurvey&data=05%7C02%7Ccathrynpugh%40psu.edu%7C8712235c44754cd914a508dc5993431f%7C7cf48d453ddb4389a9c1c115526eb52e%7C0%7C0%7C638483736213249145%7CUnknown%7CTWFpbGZsb3d8eyJWIjoiMC4wLjAwMDAiLCJQIjoiV2luMzIiLCJBTiI6Ik1haWwiLCJXVCI6Mn0%3D%7C0%7C%7C%7C&sdata=YlIL3DrzAk%2FjzeLLj49AWTOVOYrPZVyQ80cT07natcs%3D&reserved=0)
* Summary of agroforestry funding opportunities in PA: [http://bit.ly/PAagroforestryassistance](https://nam10.safelinks.protection.outlook.com/?url=http%3A%2F%2Fbit.ly%2FPAagroforestryassistance&data=05%7C02%7Ccathrynpugh%40psu.edu%7C8712235c44754cd914a508dc5993431f%7C7cf48d453ddb4389a9c1c115526eb52e%7C0%7C0%7C638483736213259693%7CUnknown%7CTWFpbGZsb3d8eyJWIjoiMC4wLjAwMDAiLCJQIjoiV2luMzIiLCJBTiI6Ik1haWwiLCJXVCI6Mn0%3D%7C0%7C%7C%7C&sdata=uTi%2BXphMwbfSf3Ht5FaX2H9HFxEjTrj51OG0pZqSa34%3D&reserved=0)
* Factsheet on Working Buffers from USFS with avg. prices for buffer crops: [https://www.fs.usda.gov/nac/assets/documents/workingtrees/infosheets/WTInfoSheet-MultiFunctionalBuffer.pdf](https://nam10.safelinks.protection.outlook.com/?url=https%3A%2F%2Fwww.fs.usda.gov%2Fnac%2Fassets%2Fdocuments%2Fworkingtrees%2Finfosheets%2FWTInfoSheet-MultiFunctionalBuffer.pdf&data=05%7C02%7Ccathrynpugh%40psu.edu%7C8712235c44754cd914a508dc5993431f%7C7cf48d453ddb4389a9c1c115526eb52e%7C0%7C0%7C638483736213266483%7CUnknown%7CTWFpbGZsb3d8eyJWIjoiMC4wLjAwMDAiLCJQIjoiV2luMzIiLCJBTiI6Ik1haWwiLCJXVCI6Mn0%3D%7C0%7C%7C%7C&sdata=wGkBYaRUU%2Fizc3oFiBPUrwp5aedcfOCrZ%2FvzmOcpJ4w%3D&reserved=0)
* [*Establishing and Managing Riparian Forest Buffers*](https://nam10.safelinks.protection.outlook.com/?url=https%3A%2F%2Fextension.missouri.edu%2Fmedia%2Fwysiwyg%2FExtensiondata%2FPub%2Fpdf%2Fagguides%2Fagroforestry%2Faf1009.pdf&data=05%7C02%7Ccathrynpugh%40psu.edu%7C8712235c44754cd914a508dc5993431f%7C7cf48d453ddb4389a9c1c115526eb52e%7C0%7C0%7C638483736213273589%7CUnknown%7CTWFpbGZsb3d8eyJWIjoiMC4wLjAwMDAiLCJQIjoiV2luMzIiLCJBTiI6Ik1haWwiLCJXVCI6Mn0%3D%7C0%7C%7C%7C&sdata=zOksbJm9Lt3PO9uSqm56ZgjL0j5V8%2FlWeFOTpijQ7NQ%3D&reserved=0)guide from University of Missouri, with sections on markets and value-add for buffer crops
* Guide on [How to Plan for and Plant [Working Buffers]](https://nam10.safelinks.protection.outlook.com/?url=https%3A%2F%2Fwww.asdevelop.org%2Fwp-content%2Fuploads%2F2021%2F05%2FCNRE-27.pdf&data=05%7C02%7Ccathrynpugh%40psu.edu%7C8712235c44754cd914a508dc5993431f%7C7cf48d453ddb4389a9c1c115526eb52e%7C0%7C0%7C638483736213280732%7CUnknown%7CTWFpbGZsb3d8eyJWIjoiMC4wLjAwMDAiLCJQIjoiV2luMzIiLCJBTiI6Ik1haWwiLCJXVCI6Mn0%3D%7C0%7C%7C%7C&sdata=8khShM%2FQLwlhjyAgomHYzfo9bihPq%2BzxKck8TWP96a4%3D&reserved=0) from Appalachian Sustainable Development
* [Building Healthy Riparian Buffers with Reliable Practices](https://ecosystems.psu.edu/research/centers/private-forests/outreach/pa-forests-web-seminar-center/archive/forestry-series/2022/tested-methods-for-establishing-riparian-forested-buffers/streams-establishment-and-maintenance-for-forest-landowners-webinar-feb-2022.pdf) presentation by Stroud Water Research Center

*Crop-specific info related to working buffers:*

* Rutger’s in-depth guide [*Choosing Plants for a Hazelnut Orchard in New Jersey*](https://nam10.safelinks.protection.outlook.com/?url=https%3A%2F%2Fnjaes.rutgers.edu%2Fe368%2F&data=05%7C02%7Ccathrynpugh%40psu.edu%7C8712235c44754cd914a508dc5993431f%7C7cf48d453ddb4389a9c1c115526eb52e%7C0%7C0%7C638483736213287754%7CUnknown%7CTWFpbGZsb3d8eyJWIjoiMC4wLjAwMDAiLCJQIjoiV2luMzIiLCJBTiI6Ik1haWwiLCJXVCI6Mn0%3D%7C0%7C%7C%7C&sdata=olwtH%2BnwBUxigI6KAa1LmCgFlAx1HRpnqvm4dcEcPX0%3D&reserved=0), with an especially helpful section “Hazelnut Cultivars for the Eastern United States: Recommendations for Orchards in New Jersey”
* [Growing and Marketing Elderberries](https://nam10.safelinks.protection.outlook.com/?url=https%3A%2F%2Fextension.missouri.edu%2Fmedia%2Fwysiwyg%2FExtensiondata%2FPub%2Fpdf%2Fagguides%2Fagroforestry%2Faf1017.pdf&data=05%7C02%7Ccathrynpugh%40psu.edu%7C8712235c44754cd914a508dc5993431f%7C7cf48d453ddb4389a9c1c115526eb52e%7C0%7C0%7C638483736213294472%7CUnknown%7CTWFpbGZsb3d8eyJWIjoiMC4wLjAwMDAiLCJQIjoiV2luMzIiLCJBTiI6Ik1haWwiLCJXVCI6Mn0%3D%7C0%7C%7C%7C&sdata=fZ16iYtib2szLlDWIs8qfuU5VhcrptWxJsJOymGpH4I%3D&reserved=0) guide from University of Missouri
* Non-Timber Forest Products Calculator from USFS National Agroforestry Center
* Penn State Extension’s [Ag Alternatives guides](https://extension.psu.edu/business-and-operations/starting-a-farm/ag-alternatives) for different enterprises. There are also many extension articles about ramps, forest farming, sustainable forestry, and watershed conservation.
* Here’s a short write-up on shagbark hickory nut milk, from the Jan ’24 agroforestry opportunities email, since someone asked for a recipe:

**Enjoying shagbark hickory nuts:**Agroforestry has been practiced by first nations for thousands of years, and there’s much to learn from indigenous relationships with forests and tree crops. At the scale of timber production, Menomonee Tribe is renowned for [their practice of sustainable forestry](https://nam10.safelinks.protection.outlook.com/?url=https%3A%2F%2Fe360.yale.edu%2Ffeatures%2Fmenominee-forest-management-logging&data=05%7C02%7Ccathrynpugh%40psu.edu%7C8712235c44754cd914a508dc5993431f%7C7cf48d453ddb4389a9c1c115526eb52e%7C0%7C0%7C638483736213301384%7CUnknown%7CTWFpbGZsb3d8eyJWIjoiMC4wLjAwMDAiLCJQIjoiV2luMzIiLCJBTiI6Ik1haWwiLCJXVCI6Mn0%3D%7C0%7C%7C%7C&sdata=FbKkVjmmApjM%2BdQMh3yYtgxN5OZau0w2cVoNiPTlUyc%3D&reserved=0), using many of the same principles of ecosystem stewardship that guide scientific forestry today. Closer to home and kitchen, Cherokee people keep tree nut traditions alive that can help anyone enjoy fruits of the forest. Check out a short video on [*Cooking Kanuchi, A Cherokee Tradition*](https://nam10.safelinks.protection.outlook.com/?url=https%3A%2F%2Fyoutu.be%2FGSBBEYtMPNU%3Fsi%3DTlgJTuHFfRpVlMY0&data=05%7C02%7Ccathrynpugh%40psu.edu%7C8712235c44754cd914a508dc5993431f%7C7cf48d453ddb4389a9c1c115526eb52e%7C0%7C0%7C638483736213308530%7CUnknown%7CTWFpbGZsb3d8eyJWIjoiMC4wLjAwMDAiLCJQIjoiV2luMzIiLCJBTiI6Ik1haWwiLCJXVCI6Mn0%3D%7C0%7C%7C%7C&sdata=NA%2FNk4eki%2FCliJmuOTqx91fwO3LN0UilwkEy1kJIVpg%3D&reserved=0) or [*Cherokee Traditions: Kanuchi*](https://nam10.safelinks.protection.outlook.com/?url=https%3A%2F%2Fwww.youtube.com%2Fwatch%3Fv%3DYedwwCjpz7w&data=05%7C02%7Ccathrynpugh%40psu.edu%7C8712235c44754cd914a508dc5993431f%7C7cf48d453ddb4389a9c1c115526eb52e%7C0%7C0%7C638483736213315975%7CUnknown%7CTWFpbGZsb3d8eyJWIjoiMC4wLjAwMDAiLCJQIjoiV2luMzIiLCJBTiI6Ik1haWwiLCJXVCI6Mn0%3D%7C0%7C%7C%7C&sdata=jnXf%2FB1OGkynEI%2FWtHn1a7m9Fk2EmPlet4bTd0Jwkv4%3D&reserved=0)to learn how hickory nuts are used in batches to make a delicious & nutritious drink or broth for rice.

Kanuchi, also referred to as shagbark hickory nut milk or tea, is one way to enjoy shagbark nuts without having to extract individual kernels out of each nut. That’s great for folks who enjoy the amazing flavor of this abundant tree but find it difficult to extract kernels from wild nuts. As these videos show, there’s a diversity of details in the approach, but the general recipe is simple. Foraging expert Sam Thayer describes it in his book *Incredible Wild Edibles*as basically: *gather and cure shagbark nuts, pulverize them in batches of at least 1 quart of in-shell nuts, boil the mash (kernels, shells and all) in a ratio of 1 quart nut-mash to 2-3 quarts water for 10-60 minutes, then strain the resulting liquid, flavoring with maple syrup to taste.*

*Lots of good books out there as well if you want a deeper dive on these practices and crops. Here are some that were referenced in the presentation, all authors from the Northeast.*

* Coppice Agroforestry by Mark Krawczyk
* Edible Forest Gardens vol. 2 by Dave Jacke & Eric Toensmeier
* Farming the Woods by Ken Mudge & Steve Gabriel
* The Hazelnut and Chestnut Handbook by Jeff Zarnowski