

Rare Forested Natural Communities in Virginia

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Virginia is a diverse state in terms of topography and forests. This diversity includes forests ranging from bottomland hardwoods and cypress in the eastern coastal plain to high elevation spruce and fir forests on the highest mountains in western Virginia. Over 62 percent of the Commonwealth is forested with more than 16 million acres of forestland. Sixty two percent of this forestland is owned by private forest landowners (VDOF 2016). This forestland has been the foundation of a sustainable forest industry since colonial times. Virginia's long history of forest and agricultural land use has resulted in a mosaic of land use patterns. Many of our current forest stands are growing on former agricultural fields and virtually all of Virginia's forests have been harvested at some point in the past.

Virginia's forests are a unique and diverse asset to forest landowners. While many forest types are common across Virginia and surrounding states, the diversity of site conditions across the Commonwealth can lead to some unique and rare forested natural communities. According to the Virginia Department of Conservation and Recreation (DCR) ecological communities are defined as: "an assemblage of co-existing, interacting species, considered together with the physical environment and associated ecological processes, that usually recurs on the landscape". As currently used, this focuses on "**natural communities**", "those which have experienced only minimal human alteration or have recovered from anthropogenic disturbance under mostly natural regimes of species interaction and disturbance." (VA DCR 2016). A detailed description of natural communities of Virginia can be found at:

http://www.dcr.virginia.gov/natural_heritage/natural_communities/document/comlist07-13.pdf

Forest management activities have the potential to impact natural communities, however this is not always a negative impact. Some communities actually depend on disturbance. While many natural communities are quite common, some forested natural communities occur only rarely or in small geographic locations. Many of the rare natural communities occur around unique land forms such as bogs, rock outcrops, high elevation forests, or other unique sites. In many cases these rare forested natural communities are in areas such as National Parks, National Forests, or other protected areas. In some cases, lands have been conserved specifically to protect these rare communities. For example the DCR has a system of Natural Area Preserves that are either owned by the DCR or are permanently protected by easements (http://www.dcr.virginia.gov/natural_heritage/natural_area_preserves/index.shtml). However even on private lands, there could be occurrences of rare forested natural communities that could be impacted by forest management operations.

In cases where landowners know there are rare natural communities on their property, this should be considered as part of their overall forest management planning and appropriate measures can be taken to protect these areas from negative impacts associated with management activities. In

some cases during management planning, or during pre-harvest planning, unique area may be discovered and forest managers would like to determine if the site potentially includes a rare natural community. Several resources are available that can provide additional information on rare forested natural communities.

In Virginia, the Department of Conservation and Recreation (www.dcr.virginia.gov) is the primary agency contact for rare natural communities. The DCR's Natural Heritage Program maintains a Natural Heritage Data Explorer (<https://vanhde.org/>) where users can search by county or can also search by specific species or other search criteria. The Natural Heritage Data Explorer search form can be found at: <https://vanhde.org/species-search>. This database can be used to identify occurrences of rare forested natural communities at the county or watershed level by selecting the Taxonomic group "Terrestrial Natural Communities".

NatureServe (www.natureserve.org) is another organization which works closely with state agencies such as the Virginia DCR. NatureServe maintains an online searchable database where specific rare species and communities are listed by county <http://www.natureserve.org/conservation-tools/listed-and-imperiled-species-county-and-watershed/county-map>. This map also includes animals and insects as well as plants and communities.

Both of these online databases can help to identify rare communities that may occur in an area, but do not list specific properties where they occur. If you need additional assistance with determining if a rare community or species exists on a specific site, you can find the contact information for the Natural Heritage information services at:

http://www.dcr.virginia.gov/natural_heritage/infoservices.shtml. A number of services are available and some require a fee for the services. You can also contact the staff at the DCR Virginia Natural Heritage Program by calling at (804) 786-7951.

The occurrence of rare forested natural communities on a landowner's property should be viewed as a unique and valuable asset that should be protected during management activities.

Awareness of rare forested natural communities and knowing where to find additional information on specific occurrences can help forest managers assist landowners as they plan for management activities.

References

Virginia Department of Conservation and Recreation (VA DCR). 2016. The Natural Communities of Virginia Classification of Ecological Community Groups (version 2.7). Available online at http://www.dcr.virginia.gov/natural_heritage/natural_communities/ncintro.shtml . Last accessed 3/24/17.

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