THE TIONESTA SCENIC AND NATURAL AREA
ALLEGHENY NATIONAL FOREST

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The Tionesta Scenic and Natural Area is a tract of approximately 4,000 acres lying within the Allegheny National Forest. It is a virgin hemlock and beech forest, one of the few sizeable remnants of this forest type that once covered several million acres on the Allegheny Plateau of New York and Pennsylvania. The area has been subject to severe wind storms in past years and outstanding oil and mineral rights and existing gas and oil lines on the area prevent it from being considered a completely undisturbed forest area.

The tract is divided roughly into two equal parts. The northern portion traversed by the loop road and scenic trail is classified as a scenic area. It is planned to develop this area with a system of nature trails and possibly a picnic area that will encourage greater public use and opportunities for people to observe a relatively undisturbed forested area. The southern portion of the tract has been classified as a natural area. This area will remain undeveloped and is designed to provide opportunities for naturalists, botanists, ornithologists, and yes, geneticists to study plant growth and relationships in an area where human disturbance is kept at an absolute minimum.

The stand composition in this hemlock-beech forest is interesting and significant in view of the transition that takes place when these types of stands are clear-cut. In this Tionesta virgin area hemlock forms approximately 75 percent of the stand and beech approximately 15 percent of the stand. The balance of 10 percent is distributed over several hardwood species. Interestingly enough black cherry forms only a little more than 2 percent of the total stand by volume. I think this point is of particular interest to geneticists. From these original stands with similar species composition originally found throughout the Allegheny Plateau have been developed the hardwood second-growth stands we have today. In these young stands black cherry comprises a significant part of the total volume on each acre. In some places this runs as high as 60 percent, but more commonly we find that about 40 percent of the sawlog stand volume is in this valuable species. From the germplasm contained in a relatively few parent trees the resulting progeny have become the most important trees in the forest. Many interesting and dramatic studies are suggested by this situation and certainly the Tionesta Scenic and Natural Area presents a fruitful place for some basic studies in this field.

We also see in this scenic area an excellent demonstration of the fact that plant and animal associations in any environment are closely interrelated. With normal deer populations, that is a herd in balance with the food, supply, we would find this hemlock-beech stand reproducing itself by natural selection as the more dominant trees lose their place in the sun. Ordinarily replacement of these individual forest giants by new seedlings would be primarily hemlock and beech regeneration in the small heavily shaded openings thus created. However, as we look around the area we find that this has not been the case. It is difficult, if not impossible, to find a single hemlock seedling

becoming established in the forest. Hemlock is a choice deer food and as a result we find the deer herd slowly, but inevitably, changing a forest type.

It is hoped that this opportunity to observe and discuss the fine example of the original forest type that we have in the Tionesta Scenic and Natural Area will provide a fitting background and orientation for closer consideration of the genetic and silvicultural aspects of management of the second growth hardwood forests that have now with few exceptions, replaced the original forest.