

Eager: Using Historic Art to Explore Legacies and Lost Function in Eastern US Forests

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Understanding forests of the past helps us to understand current forest ecosystems and how they may change in the future. Historical landscape paintings are a potentially valuable source of information about the past with color images that pre-date photography. With these pictures we have the potential to explore forest structure and forest community attributes that relate to productivity and ecosystem function. However, the use of these images in historical ecology has been hampered by the questions of image validity: How truly accurate are the images portrayed in these paintings? And, how much of an image is an artist's manipulation of a scene to best illustrate a message, allegory, or romanticized view of nature?

The proposed interdisciplinary project uses tools and knowledge from humanities and ecological sciences to address these concerns and evaluate the validity of forest paintings by nineteenth-century artists as a potential data set for historical ecology. This project has three primary objectives: (1) determine which artists and which artwork can be used reliably as a reference for historic forest conditions, (2) use historic paintings to quantify five key features of a forest system that relate to ecosystem processes: (a) forest structure; (b) tree mortality and decay, (c) the communities of fungi and epiphytes found in latesuccession forests; (d) understory regeneration and successional dynamics in canopy gaps, and (e) shift in dominant overstory species composition over time; and (3) evaluate how our concept of wild or natural forests that operated in the past and were influenced heavily by 19th century landscape art affect the reality and the perceptions of forests today.