## Photoperiodism in Several Lake States Forest Tree Species

Tour Guide: Richard Watt [8/]

Stock of red pine, white pine, black spruce, and white spruce was grown in a nursery in northern Florida and a nursery in northeastern Wisconsin. Artificial light was used to supplement the naturally short photoperiod that accompanies the long growing season in Florida. As a check, artificial illumination was also used on part of the material in the Wisconsin nursery.

With the added light, stock of all four species grew about twice as fast in the southern nursery as in the Lake States nursery. The added daylight also increased somewhat the growth of the spruces, but not the pines, in the Lake States nursery.

Southern-grown 2-0 stock was planted along with northern-grown stock of similar size (but 2-2 in age) on the Pike Bay Experimental Forest. After 2 years in the field the southern-grown stock has done just about as well as the older and more expensive stock from the northern nursery.

Results of this study may ultimately open the way to cheaper and more rapid production of high-quality outplanting stock for reforestation in the Lake States. The extension of the photoperiod in nurseries in the Lake States may also prove advantageous for growing spruce stock.

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