Studies on Solid Wood. IV. Comparison of Nordic Pine Trees

The methods developed previously for measuring stiffness, creep, and axial compression of solid wood have been used for a comparative study of three specimens of pine (Pinus silvestris), collected at different latitudes in Scandinavia (North Sweden, South Finland and Denmark). Axial samples taken from the sapwood with equal dimensions (7x9x152 mm) were measured "raw", then dried, extracted and (again) dried. In addition, changes of extract-free wood by treatment with alkali and with DMA/LiCl and also by substitution with succinic acid, were studied. Several expected and some unexpected results were obtained. In spite of the distinct differences in morphology, the pine specimens were generally quite similar. The specimens were also studied by other wood scientists, but a combined evaluation with the present results is not really possible without a deeper understanding of the wood ultrastructure, which is still far from being achieved.