forestry in action

A Multiple Core Holder for Addo-X

The Swedish "A.B. Addo Tree Measuring Instrument", more commonly called the "Addo-X" or the "ring counter", facilitates the task of measuring annual growth of trees from increment cores (Eklund 1949). The instrument gives fast, reliable, and consistent results with very little or no eye strain, compared with the core holder-ruler-hand lens method (Brace and Magar 1968). This is especially true when measuring slow-growing trees such as black spruce. To increase the measuring speed further, I devised a multiple core holder that will allow the measurement of several increment cores consecutively, once it is positioned on the carriage of the ring counter

(Fig. 1). This means a considerable saving in time.

Figure 2 shows the proper slat and groove sizes for a multiple core holder for 10 increment cores (4 mm diam. each). The 6-mm-wide slats are rip-sawn from any nominal 1-inch hardwood stock. The grooves are separately rip-sawn. Two $\frac{3}{16} \times 3\frac{1}{2}$ -inch brass stove bolts with wing nuts are used for tightening and locking in the cores. The core holder can be made any length desired but the critical width of 65 mm must not be exceeded, because this is the maximum lateral movement of the carriage. It can be manually aligned on the cruciform of the Addo-X, or two brass

Fig. 1. The three components of Addo-X; the adding machine (l.), the impulse unit, and the measuring unit (r.), with the core holder positioned for measurement.

MULTIPLE CORE HOLDER

Fig. 2. Line diagram showing end and side view of multiple core holder.

screws may be installed in slat number 4 for automatic alignment (Fig. 2).

Cores must always be loaded so that measurement begins from the right-hand side and the wing nuts should be kept to the front of the carriage. Numbers can be stamped on the slats to facilitate identification of cores.

If cores are mounted immediately after being taken from the tree, the risk of breakage during transportation and subsequent handling is minimized and the cores will dry straight. All 10 cores in the holder can be prepared simultaneously by sanding. The cores are then ready for measurement

without further assembling. Properly labelled, core holders will also provide excellent storage.

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Literature Cited

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