

This is a species originally described from the Cretaceous of Medicine Hat, Alberta, but which has more recently been found in the Tertiary of Kettle River, near Midway, B.C.<sup>2</sup> Its present occurrence in the Edmonton Series is, therefore, fully in accord with its previously known distribution.

SEQUOIA ALBERTENSIS, N. SP.

The unnumbered specimen from the Edmonton Series represents a wood which is exceedingly well preserved in many portions, and admits of a detailed diagnosis. It is therefore taken as the type to which specimens 275 and 276 also belong, and they all clearly represent the same species of *Sequoia*. The diagnosis is as follows:—

SEQUOIA ALBERTENSIS, N. SP.

*Transverse*.—Growth rings variable; the summer wood dense, sometimes rather open and occasionally double, the transition from the spring wood rather abrupt; spring wood open, the tracheids thin-walled, large, distinctly squarish-hexagonal and often much elongated radially. Resin cells scattering, sometimes rather numerous throughout, but especially dominant in the summer wood. Medullary rays *distant 2-8, more rarely 10 rows of tracheids*. Tracheids rather uniform, sometimes in irregular rows in the summer wood.

*Radial*.—Ray cells straight or more often contracted at the ends, equal to about 4 spring tracheids; the upper and lower walls rather thick, entire or sparingly pitted; the terminal walls rather thin, not pitted; the lateral walls with oval, conspicuously bordered pits, the broadly lenticular orifice usually diagonal to the cell axis, at first 1 or 2, at length becoming 1 per tracheid in the summer wood. Bordered pits large, numerous, round or oval, commonly in two rows in the earlier spring wood. Pits on the tangential walls of the summer tracheids numerous and prominent and large, but rather narrowly lenticular. Resin cells numerous, resinous.

*Tangential*.—Medullary rays numerous, often upwards of 54 cells high, frequently more or less two-rowed. Cells frequently very resinous, oval or squarish, sometimes oblong, but chiefly uniform and equal throughout.

A comparison of these woods with that of the existing *S. sempervirens*, or red-wood, shows most interesting and very close relations. In the diagnosis of *S. albertensis*, certain of the structural details are given in *italics*. These indicate the respects in which there is an essential difference between it and *S. sempervirens*. In all other features the two woods are

<sup>2</sup>. *Ibid.*