Abstract Submitted
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Gravity related waves in plants. CLAUDIA WAGNER, ORVIN WAGNER, Wagner Research Laboratory — Calculations using sets of plant internodal spacings and actual measurements give wave velocity ratios and actual velocities. Plant shapes seem to derive from these gravity related waves. The velocities of the waves increase in jumps as their direction of travel changes from vertical to horizontal. The calculated ratios of the vertical velocity to the horizontal velocity are ratios of small integers. Short chunky trees like apple have a small velocity ratio (calculated ratio for apple 4/3) while tall spindly trees like ponderosa pine (3/1) have a large ratio. Measured wave velocities for Ponderosa pine are: 1207±60 cm/s for horizontal and 3469±170cm/s for vertical. The plant internal structure seems to determine the velocity ratio. e.g. see *Physiol. Chem. Phys. & Med. NMR* (1996) 28: 173-196 and later papers by O.E. Wagner. The results might indicate that gravity is a wave phenomenon since plants respond to gravity in a wavelike fashion. Plants waves seem to have a limited set of frequencies and a recent observation is that they are the same in every direction. The latter permits one to write some very enlightening equations.

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