

Figure 1. Pen sketch of Jaina Kalpa Vriksha copied from Ravikumar (ref. 18).

of Jaina cosmology¹⁸, which has a similar structure. This, however, could not be tested because of lack of sufficient samples. Figure 2 shows chronological changes in D/L ratio of MLS from second-century (Jaina) to thirteenth-century (Hoysala) temples. It can be seen that this ratio has drastically decreased over a period of time. We propose that these MLS represent an entirely different model of Jaina culture whose D/L ratio was high. When this cult structure from North India was copied in South Indian temples (probably as a result of some Jaina kings converting to Vaishnavism) a 'copy error' was probably incorporated over a period of time, leading to a resemblance to maize ears.

Thus it may be inferred that the MLS at Somnathpur do not represent maize ears. Hence the implication

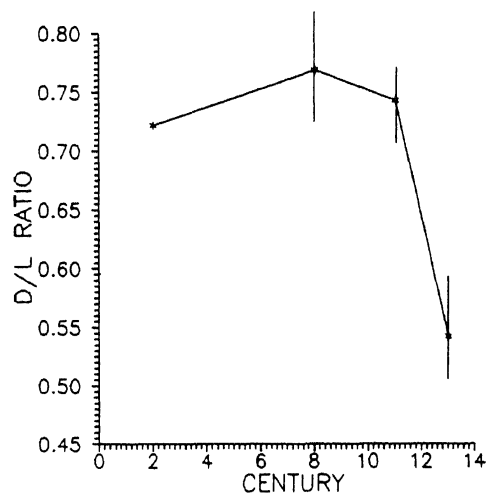


Figure 2. D/L ratios of MLS over centuries. Some of the data for a few centuries have been clubbed. Vertical bars indicate one standard deviation. Sources: second century, ref. 14; eighth century, refs. 14, 15; tenth century, refs. 19, 20; thirteenth century, present work, recorded at Somnathpur temple.

drawn thereupon that maize was being cultivated in South India in pre-Columbian times cannot be unequivocally supported on the basis of these structures; nor trans-oceanic trade contacts between the Old World and the New World during pre-Columbian times.

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Symmetry preservation during radiation damage

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An examination of radiation-damage processes consequent to high-energy irradiation in certain ammonium salts studied using ESR of free radicals together with the structural information available from neutron diffraction studies shows that, other factors being equal/nearly equal, symmetry-related bonds are preserved in preference to those unrelated to one another by any symmetry.