

**THERMOLUMINESCENCE DATING OF ARCHAEOLOGICALLY
HEATED SOIL A CASE STUDY: BELI-LENA,
KITULGALA A PREHISTORIC CAVE SITE OF SRI LANKA**

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The Beli-lena cave at Kitulagala is in Sri Lanka's rain forests and as per ²⁵C-14 analysis obtained from several foreign laboratories, dates back from 3000 B.P. to 27,000 B.P. The associated artefact assemblages from the pre 27,000B.P. horizon upwards, are mesolithic with characteristic geometric microliths (kind off a stone tools) which in Europe does not come to prominence before 12,000 B.P. (1) 08 soil samples were collected from this excavated site for \thermoluminescence dating suspected to be archaeologically heated. These samples were checked whether. (a) Saturated (b) Fading (c) Inhomogenous (d) Anomalous or (e) prehistorically heat treated (2). only 03 samples were found to be suitable for T.L. dating, Quartz inclusion techniques (3) was applied to these 03 samples, and the following dates have been obtained. The errors of the dates have been calculated according to Aitken (4).

Layer No.	C-14 dates	T.L. dates :
VII a (2)	3640 ± 60 B.P. (B.A.I.)	3560 ± 185 B.P.
III c (2)	15,780 ± 90 B.P. (F.R.A.)	15,397 ± 846 B.P.
III b (1)	17,870 ± 570 B.P. (P.R.L.)	17,217 ± 1033 B.P.

B.A.I. (Beta analytical Inc Florida U.S.A.)
F.R.A. (Through R.R. Protsch, Radio-Carbon Laboratory France)
P.R.L. (Physical research Laboratory Ahmedabad India)

The T.L. dates obtained are consistant with C-14 dates and this further consolidates the presence of geometric microliths in Sri Lanka before 12,000 B.P. in Sri Lanka as compared to Europe. (1).

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