

A report on the occurrence of intertrappean beds in an abandoned cave at Bhaja, Pune District, Maharashtra

A study was carried out in one of the abandoned caves at Bhaja, Pune District, Maharashtra (Figure 1). In this abandoned cave, a partially consolidated, brownish-grey, parallel-laminated clayey sequence having a thickness of around 1 m and lateral extent of more than 4 m is found to occur between two massive, amygdaloidal basalt flows (Figure 2 *a*). Hand specimen reveals compact, fine, clay-rich laminations alternating with coarse granule, sandy and silty layers. The upper portions of the parallel-laminated, clayey sequence exhibit highly compressed, baked, undulating, broken and distorted laminations due to the heat and overloading pressure of the younger

lava flows. The top of this clayey sequence also exhibits the development of mud cracks. The occurrence of highly-fragmented carbonized remains of plant material is commonly observed. Microscopic examination of the thin section

shows a dominant mode of dark coloured, fine-grained clayey matter. Within this clayey matter, rounded to well-rounded detrital fragments of basalt are frequently observed. In addition, altered mineral grains of olivine, pyroxene and magnetite and the occurrence of secondary minerals like zeolites are also observed. Vitric materials, which are relics of volcanic glass, are commonly seen as rounded to sub-rounded yellowish-brown, altered fragments (Figure 2 *b*). At places, relatively fresh, vesicular, rounded fragments of glass shards (black in colour) are also observed. These characteristics clearly suggest the occurrence of an intertrappean horizon at one of the abandoned caves at Bhaja.

ACKNOWLEDGEMENTS. P.K.S. is grateful to Dr C. Rajshekhar and Dr V. D. Borkar, Department of Geology, Agharkar Research Institute, Pune for their help and able guidance.

Received 17 September 2001; revised accepted 28 January 2002

P. K. SARKAR^{†,*}
K. S. YENGKHO[#]
K. A. MOGHE[‡]

[†]Department of Geology,
Fergusson College,
Pune 411 004, India
[#]Kakching Mayai Leikai,
P.O. Kakching,
Manipur 795 103, India
[‡]89/16 A, 'Kaumudi',
Shikshak Nagar,
Pune 411 038, India
**For correspondence*

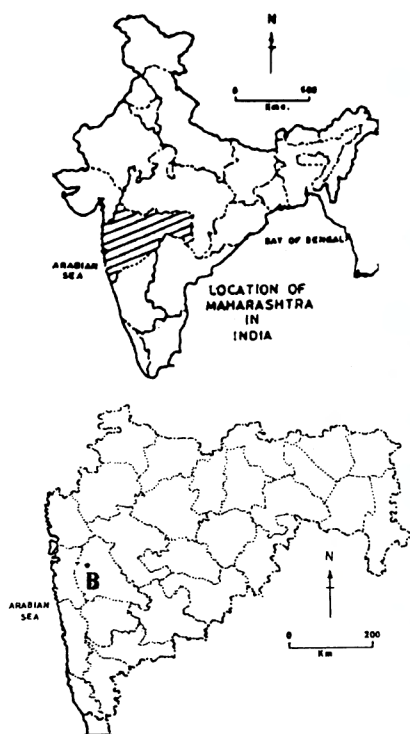


Figure 1. Location of the study site.



Figure 2. *a*, Fine, parallel-laminated brownish-grey intertrappean sequence in an abandoned cave at Bhaja. *b*, Photomicrograph in plane polarized light, exhibiting rounded to sub-rounded, yellowish-brown relics of volcanic glass within fine-grained matter.