PLATES

1 *Ajanta Caves seen from the 'Viewpoint'*

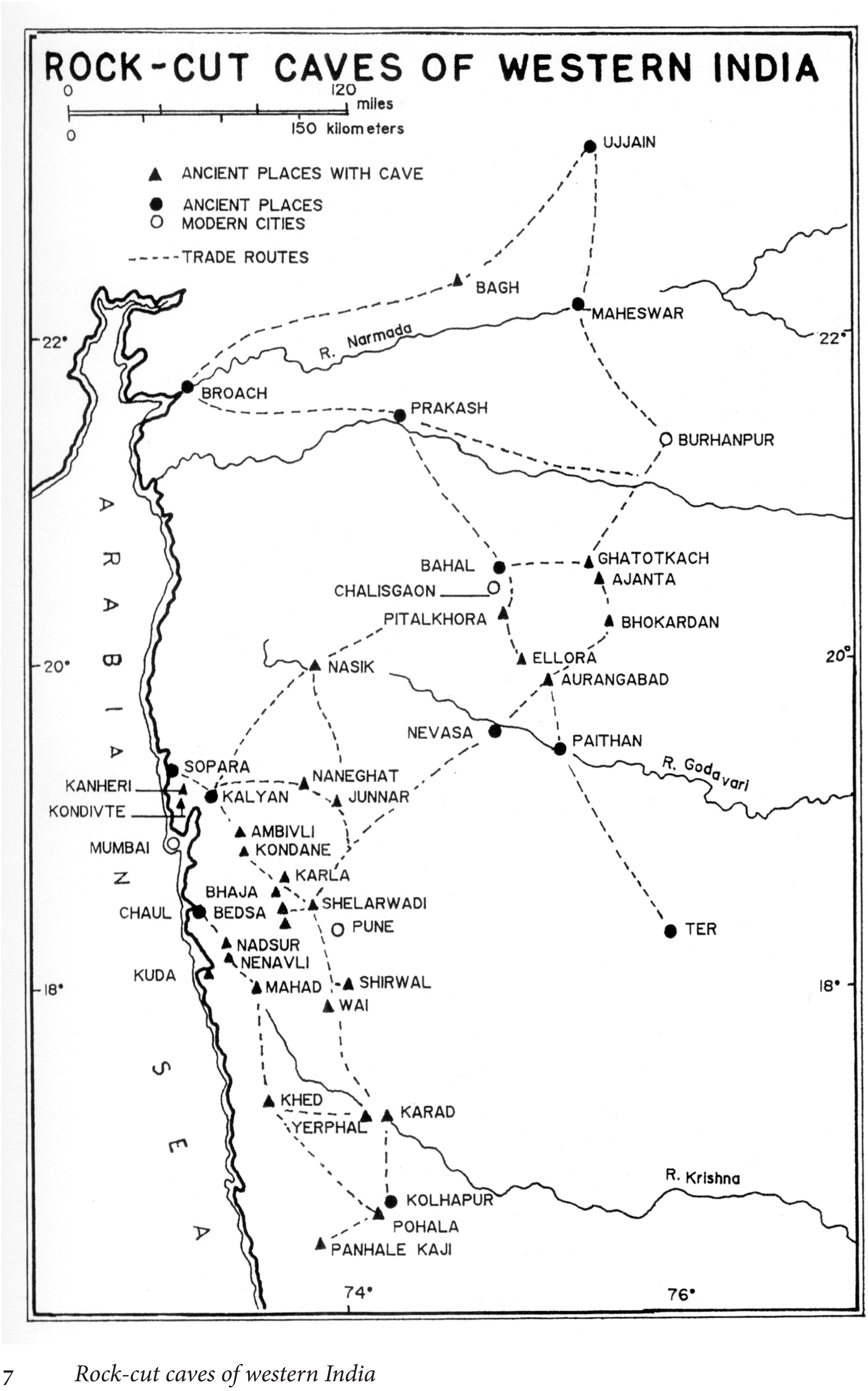
 Ajanta caves during the monsoon season

3 *The waterfall of Ajanta*

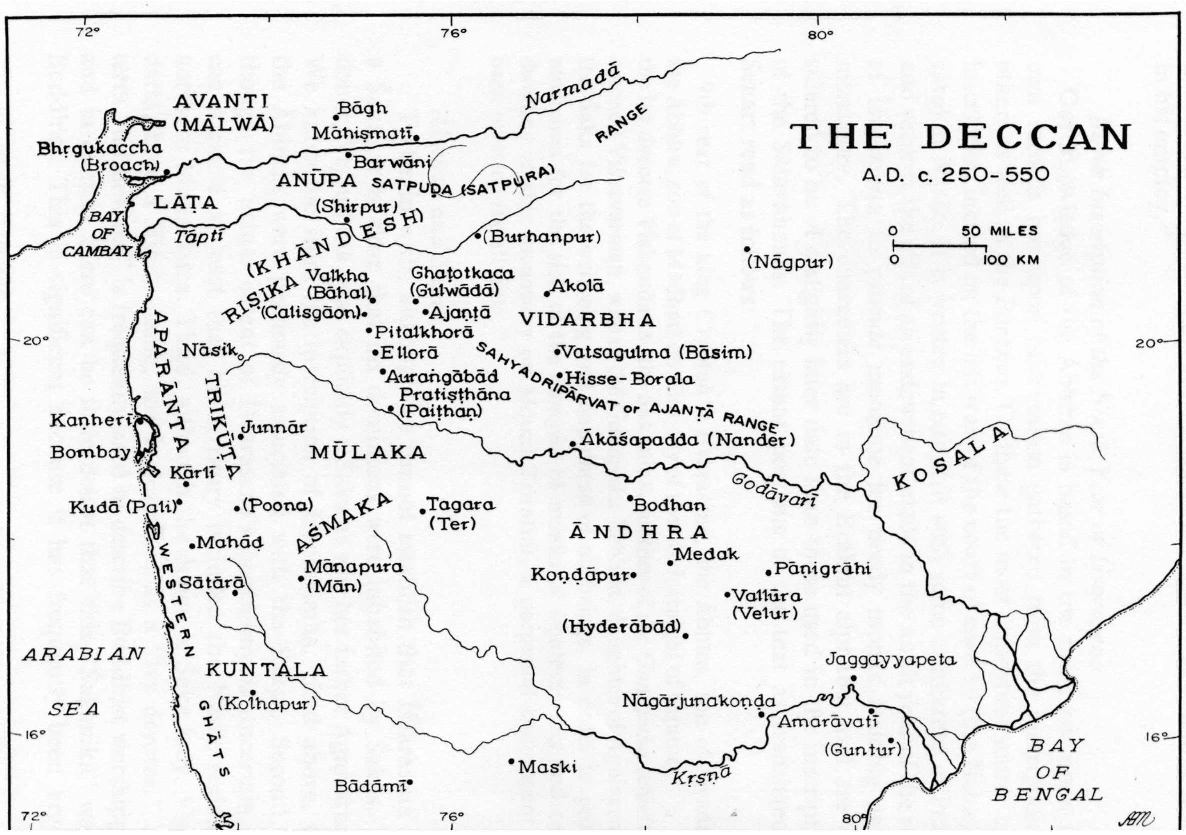
 Saptakunda (seven tanks) above the waterfall

5 *Map of India showing rock-cut cave sites (source: Fergusson and Burgess 1880)*

6 *Map of western India: trade routes and centres of rock-cut architecture*



7 *Rock-cut caves of western India*



8 *Map of the Deccan, circa 250-550 CE*

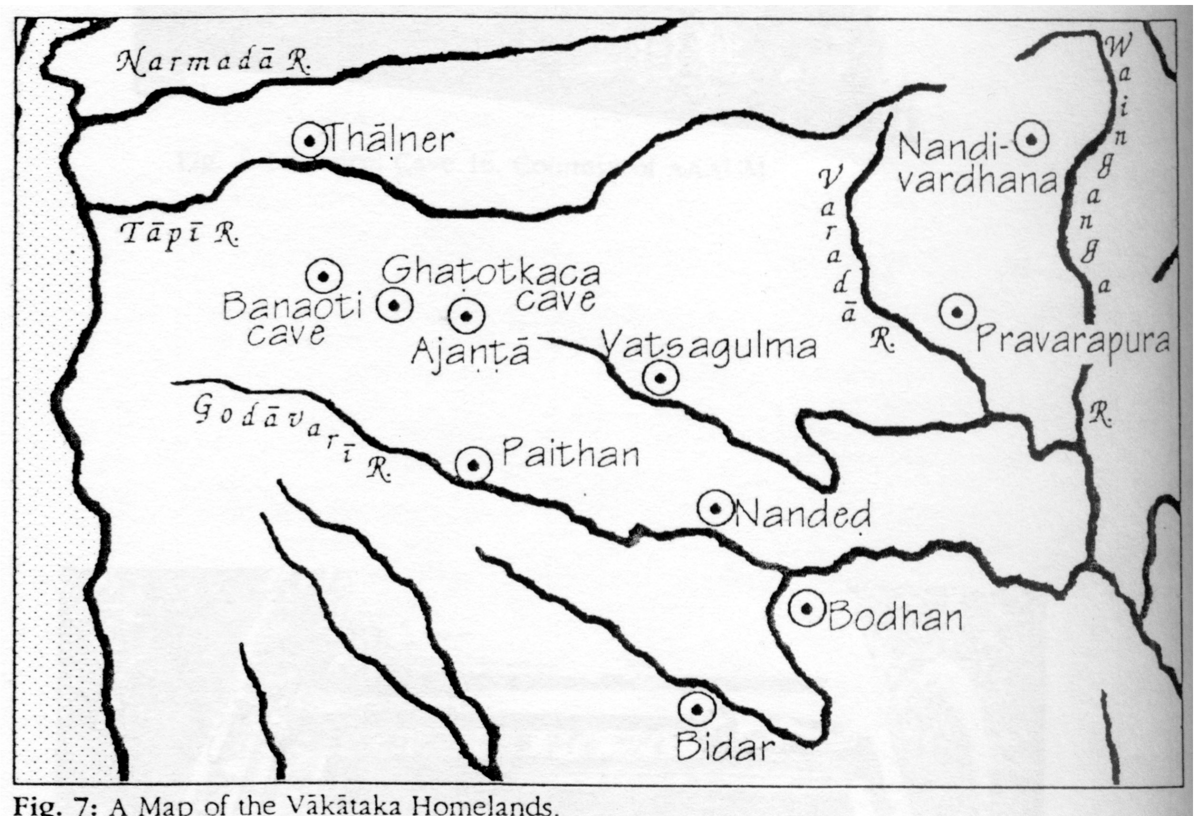
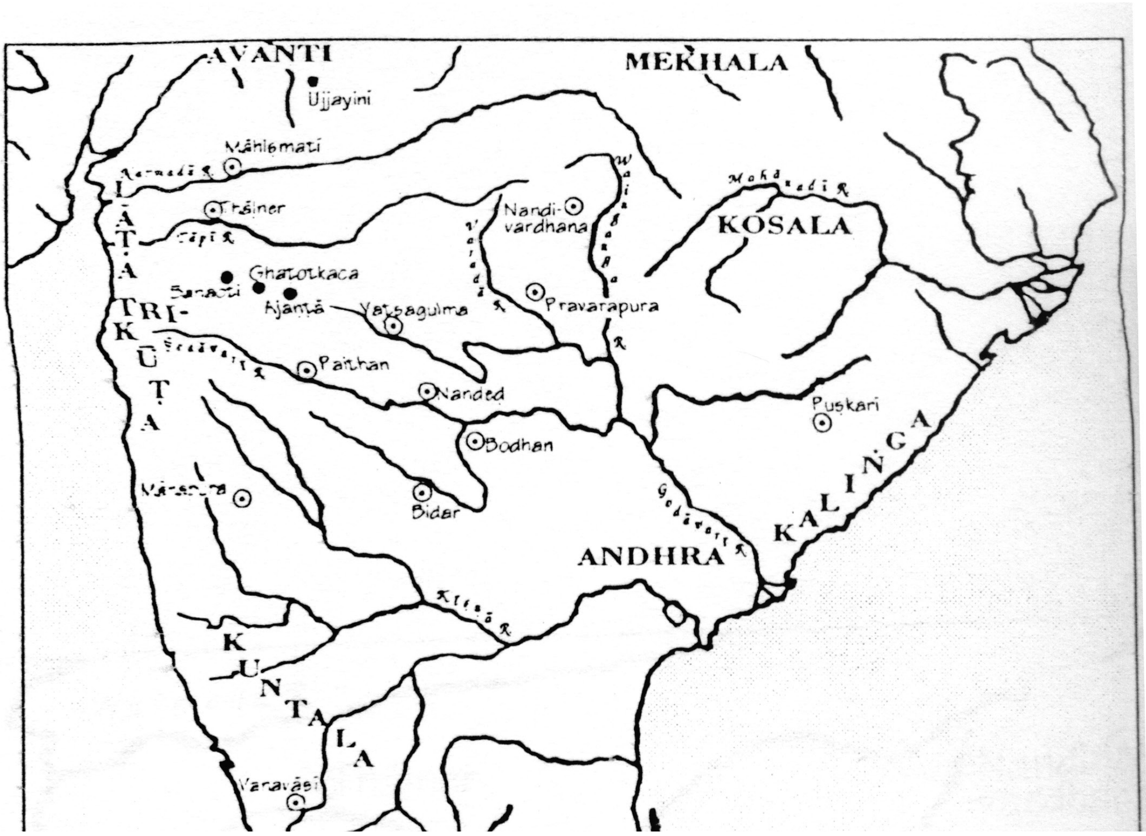
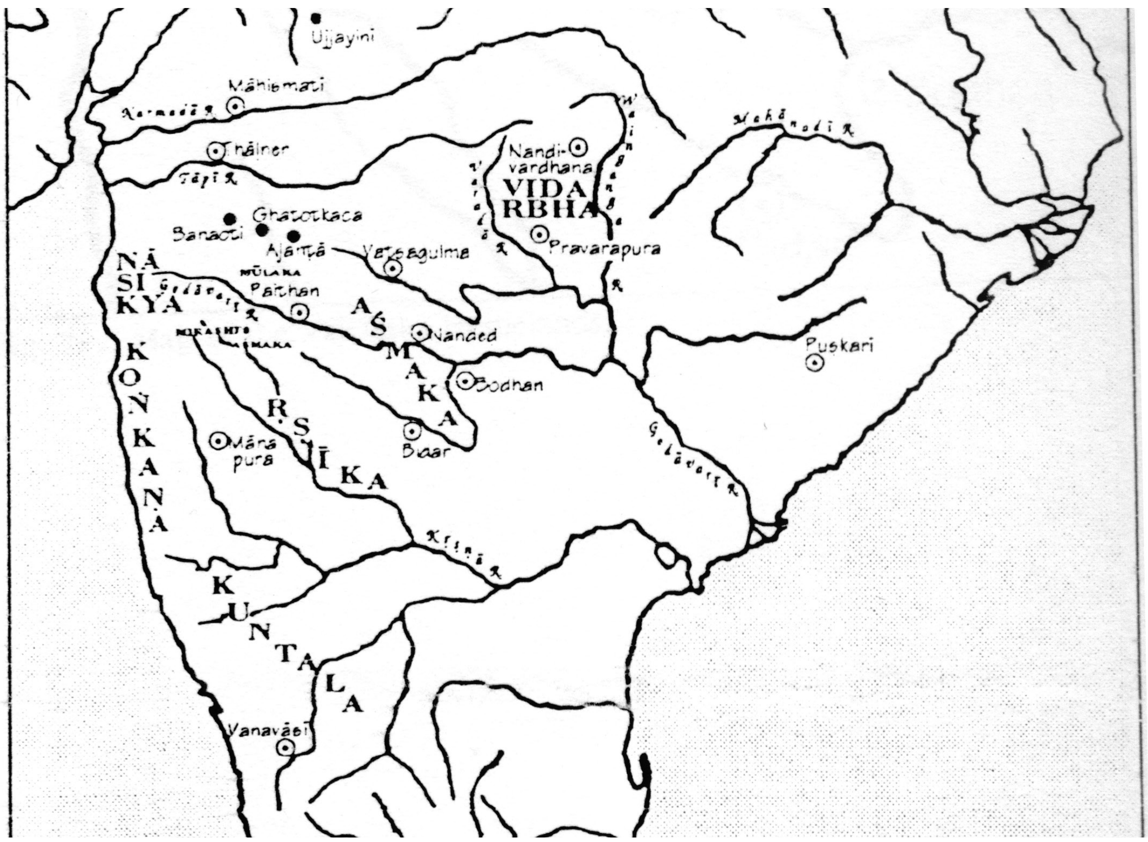


Fig. 7: A Map of the Vākāṭaka Homelands.

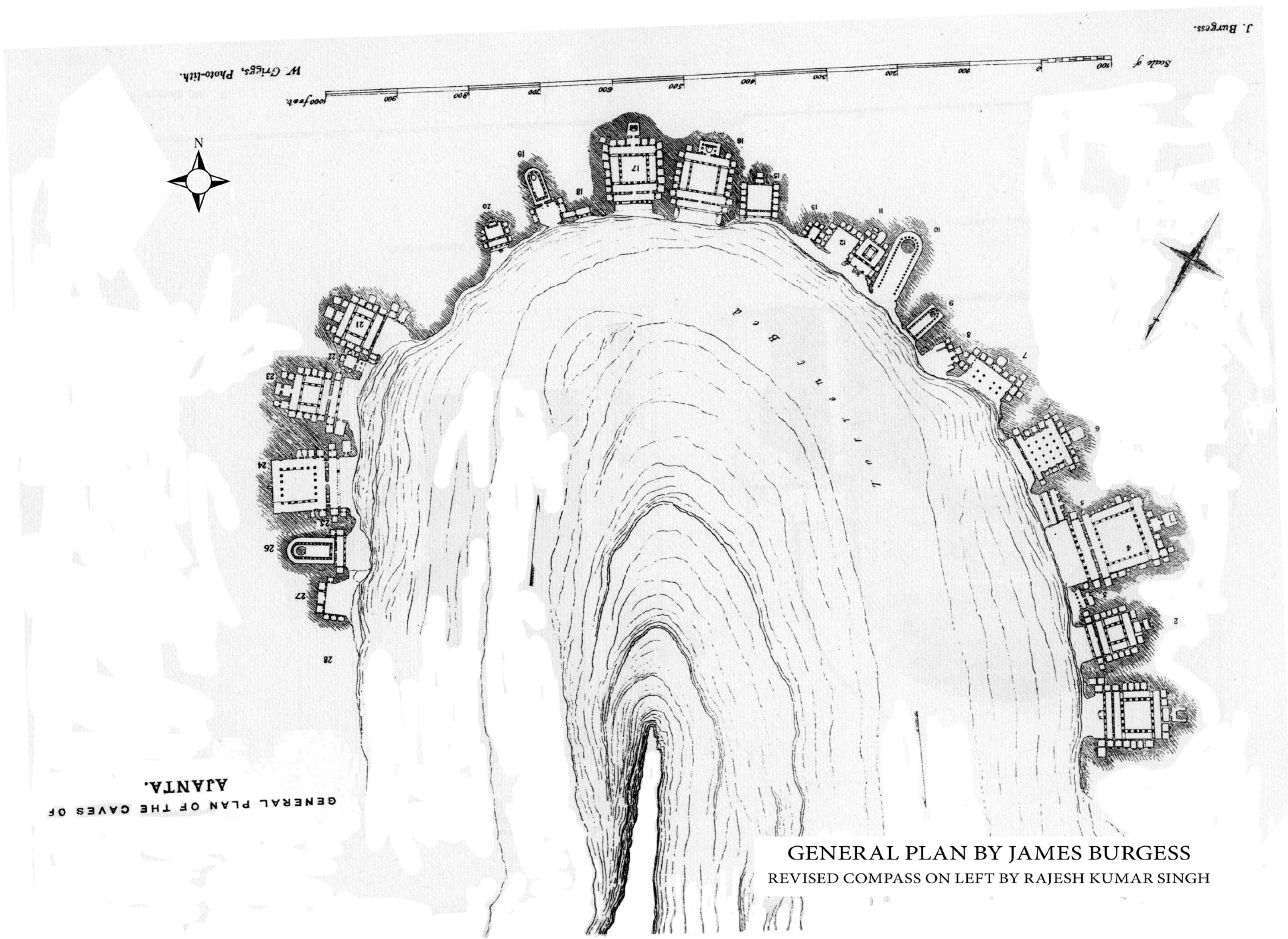
9 *Map of the Vakataka homelands*



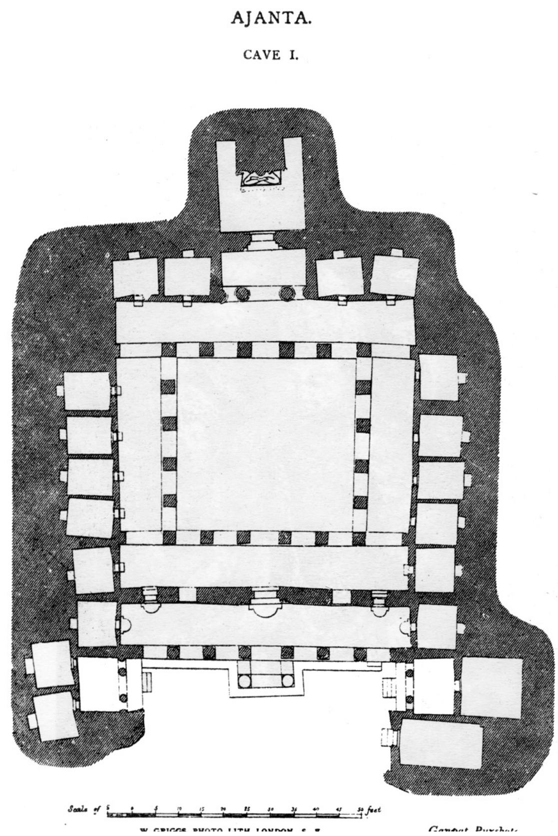
10 *Map of the lands named in Varahadeva's inscription in Ajanta Cave 16*



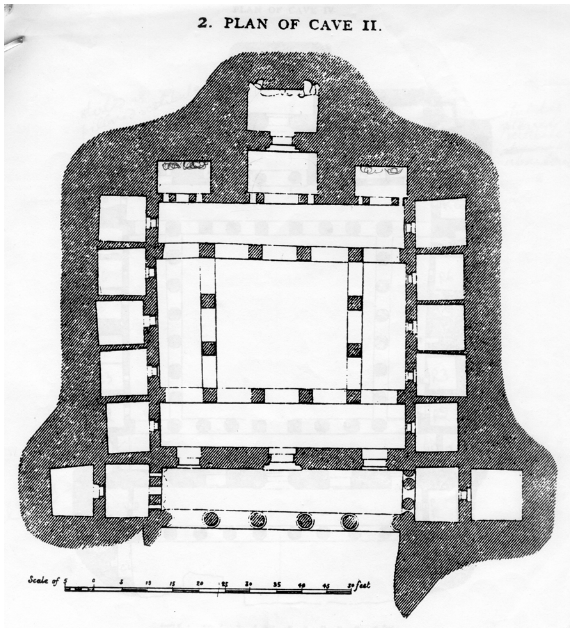
11 *A map of the lands named as Anantavarman's feaudatories in Visrutacarita, i.e. the eighth chapter of Dandin's Dasakumaracarita*



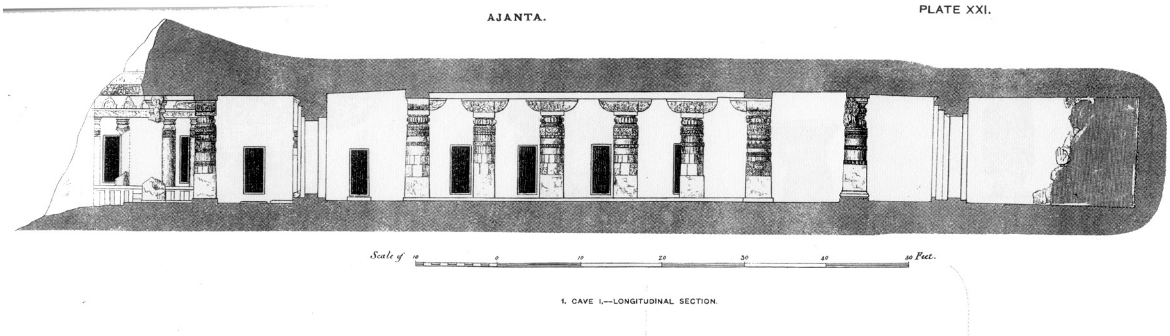
12 *General Plan of the Caves of Ajanta (source: Fergusson and Burgess 1880) comprising additional compass placed by R. K. Singh on the top left side pointing to the due north*



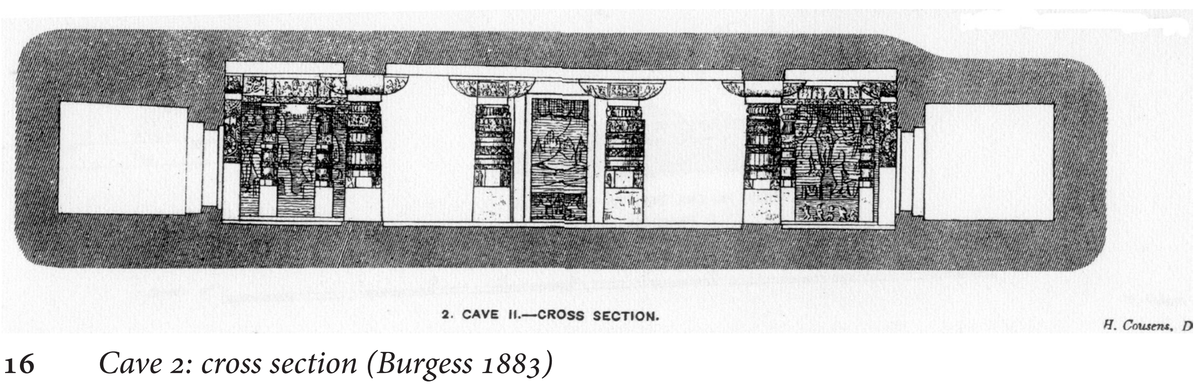
13 *Plan of Cave 1 (Fergusson and Burgess 1880)*



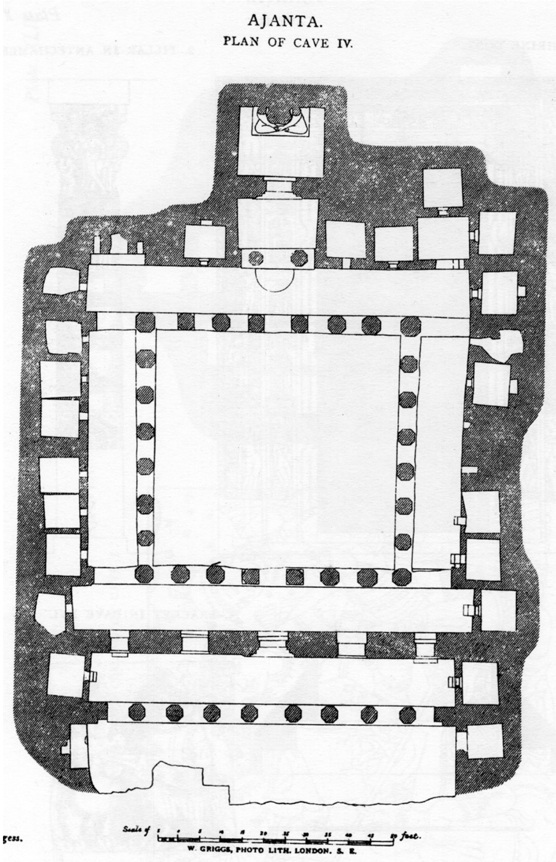
14 *Plan of Cave 2 (Fergusson and Burgess 1880)*



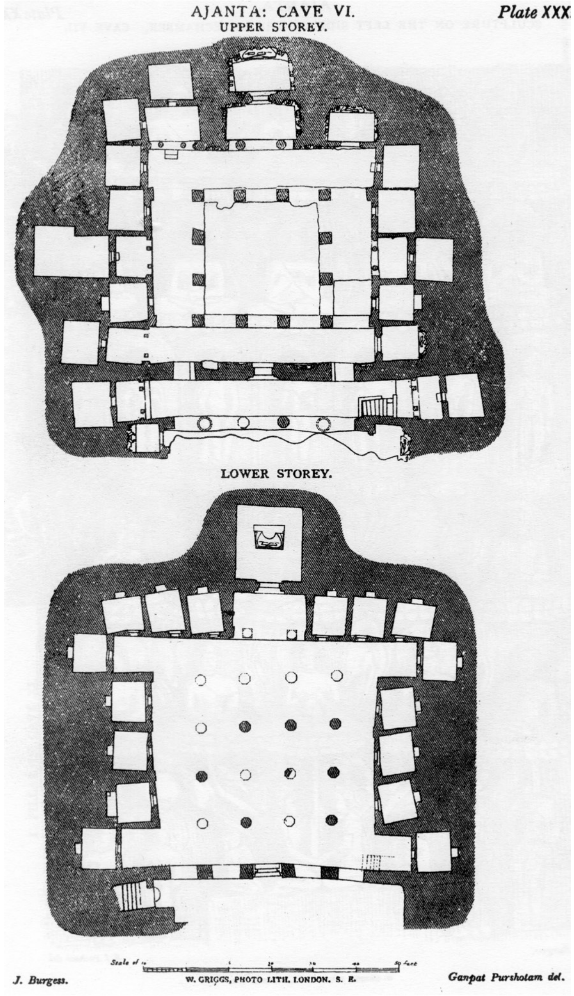
15 *Cave 1: longitudinal section (Burgess 1883)*



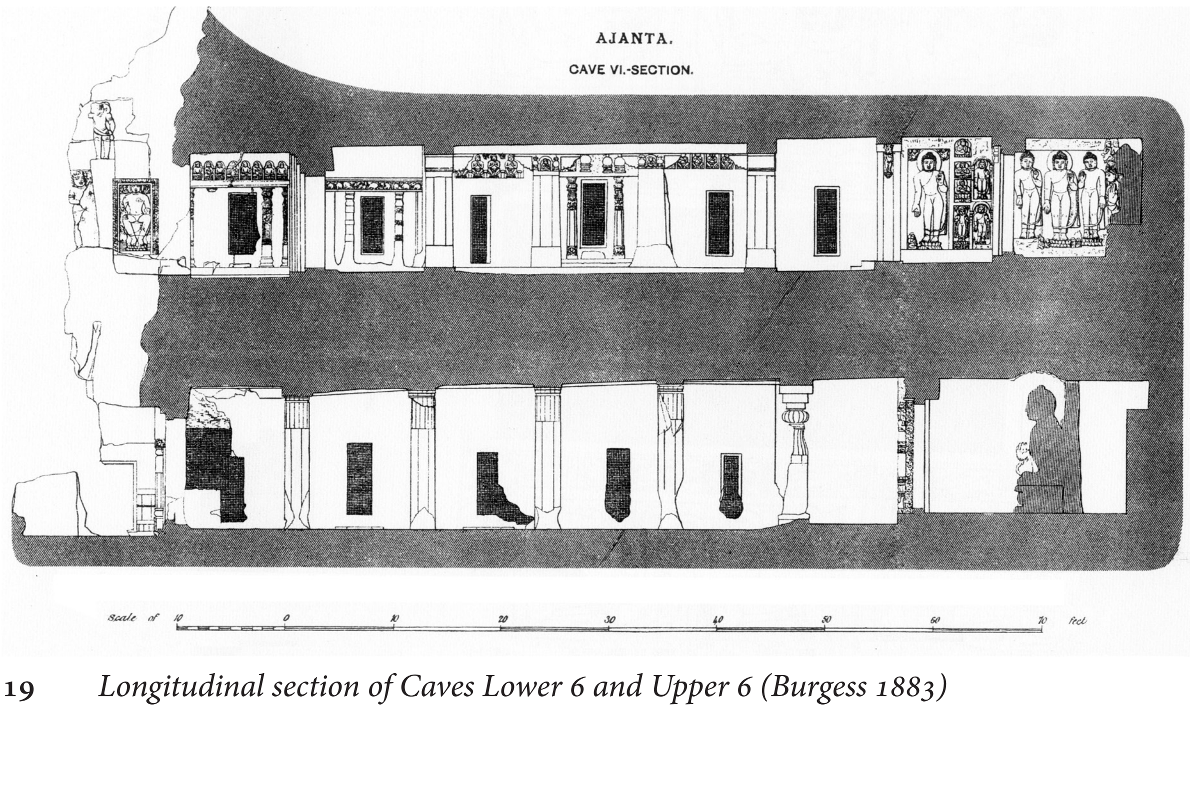
16 *Cave 2: cross section (Burgess 1883)*



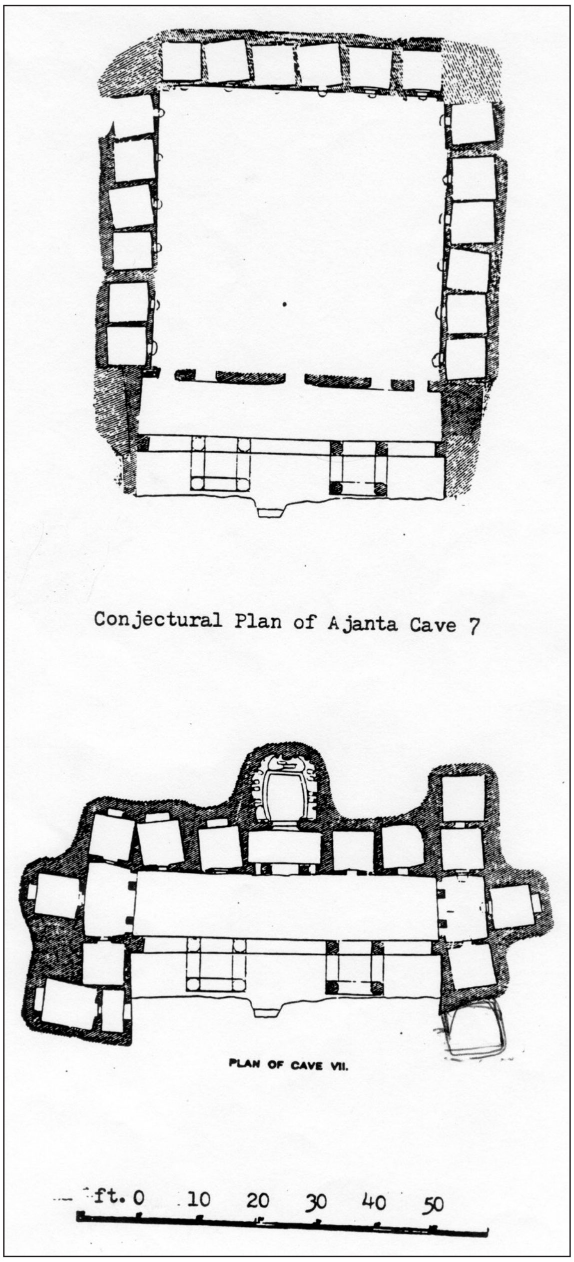
17 *Plan of Cave 4 (Fergusson and Burgess 1880)*



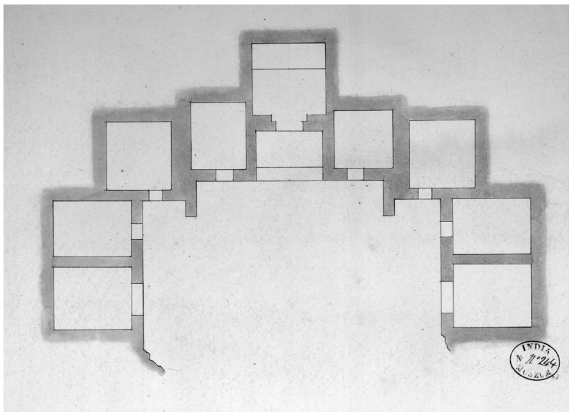
18 *Plans of Caves Lower 6 and Upper 6 (Fergusson and Burgess 1880)*



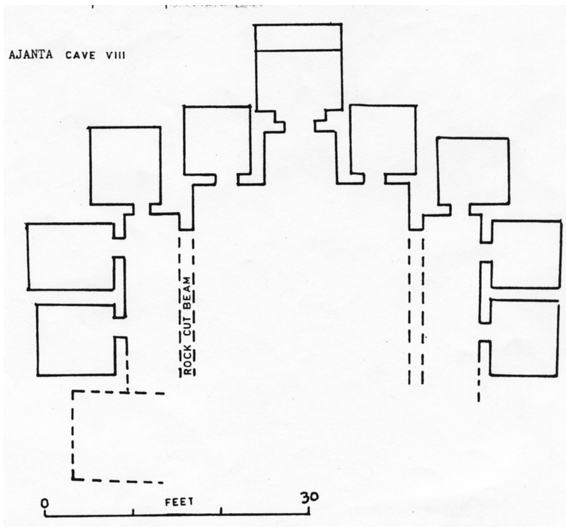
19 *Longitudinal section of Caves Lower 6 and Upper 6 (Burgess 1883)*



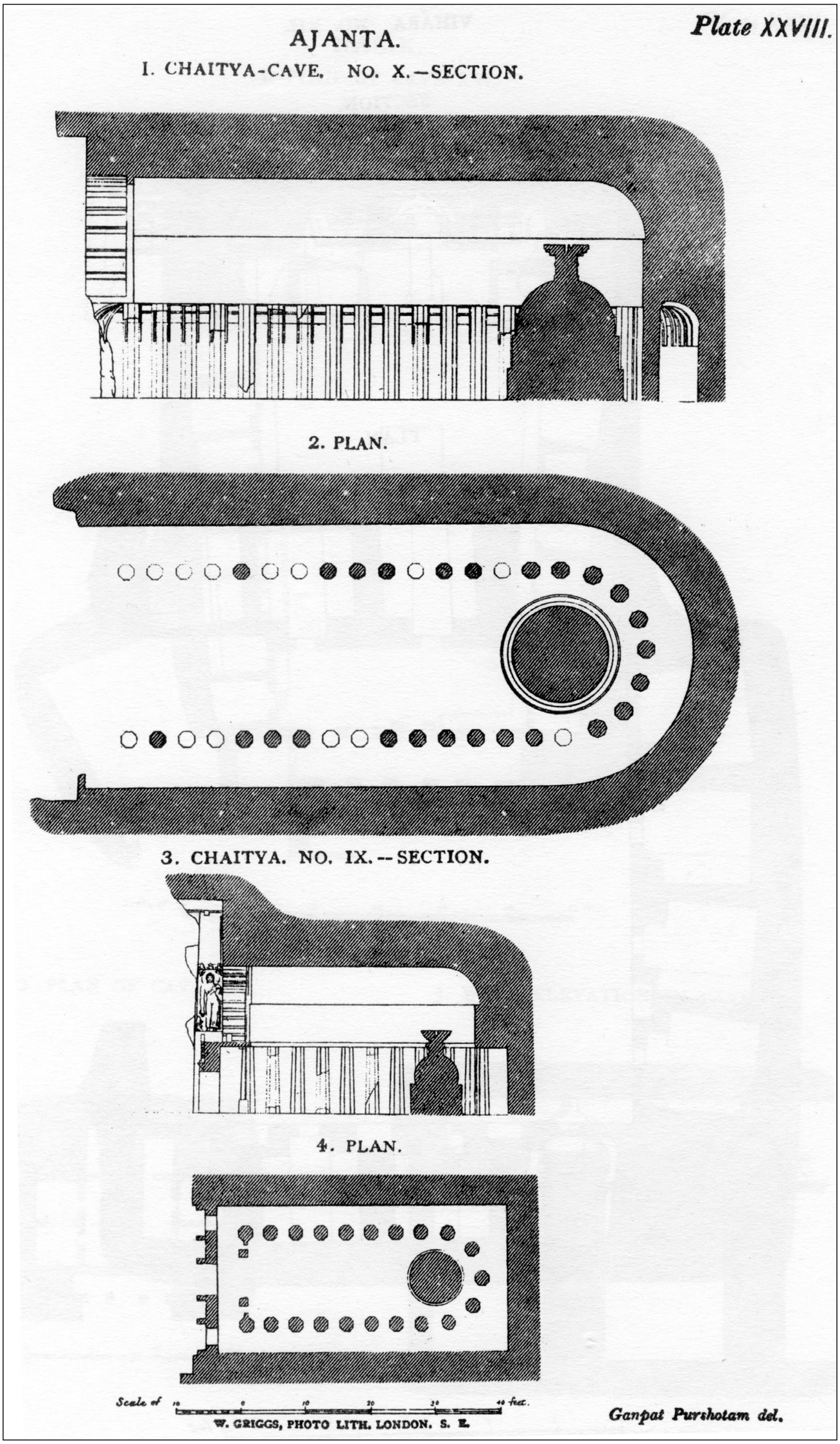
20 *Plans of Cave 7. Below: Burgess (1883). Above: conjectural plan by Spink.*



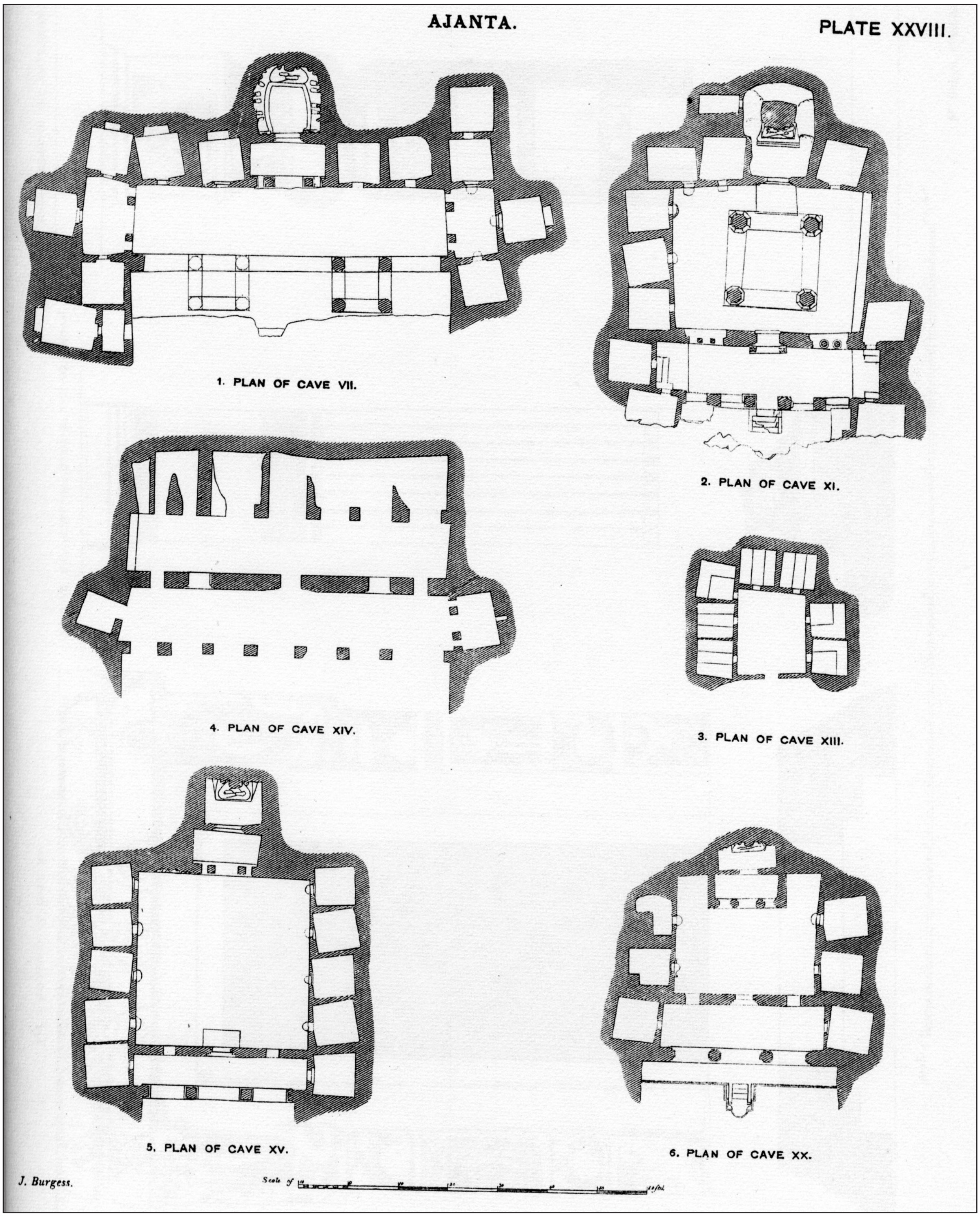
21 *Plan of Cave 8 (Gill 1876)*



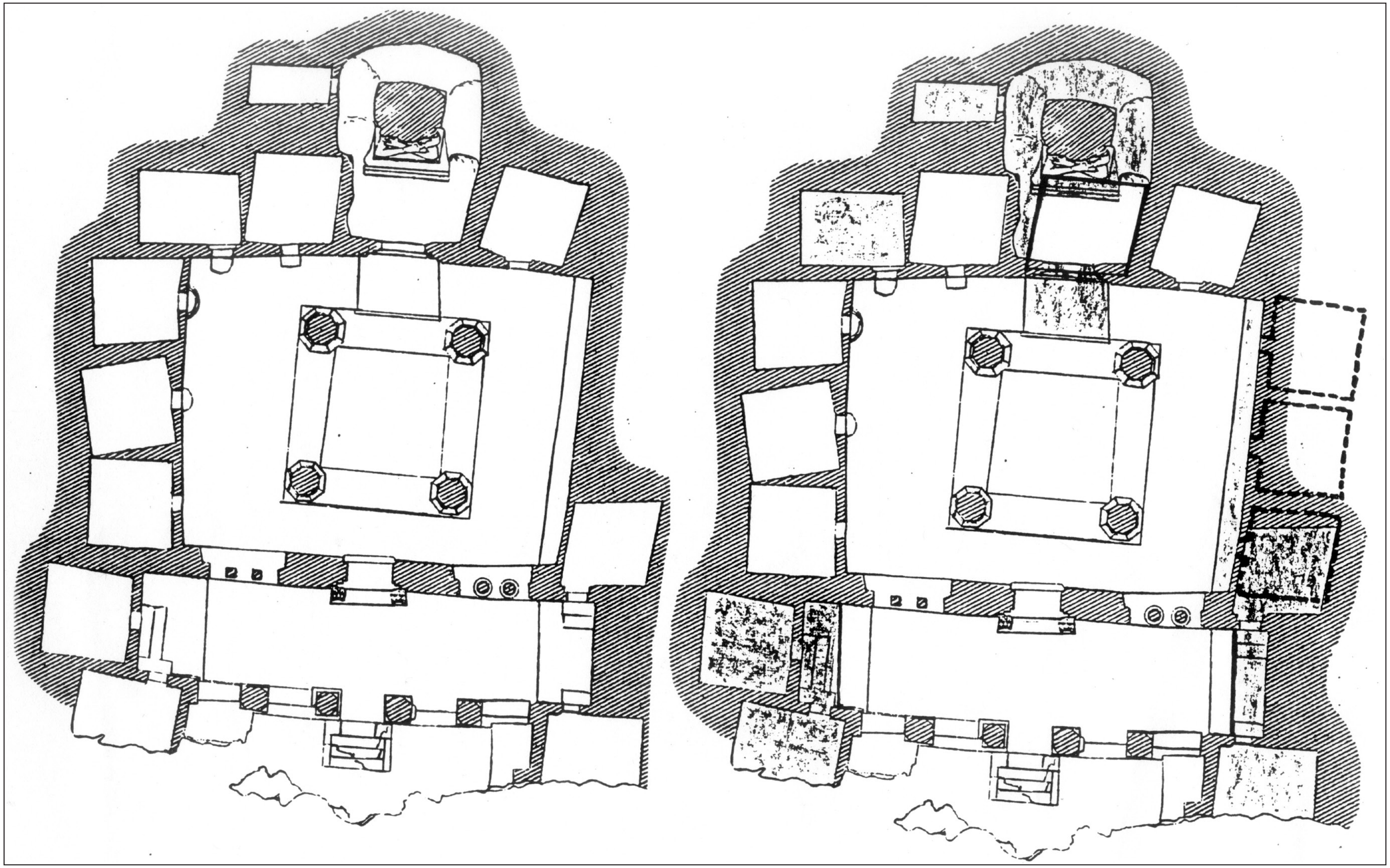
22 *Plan of Cave 8 (Jadhav 1987)*



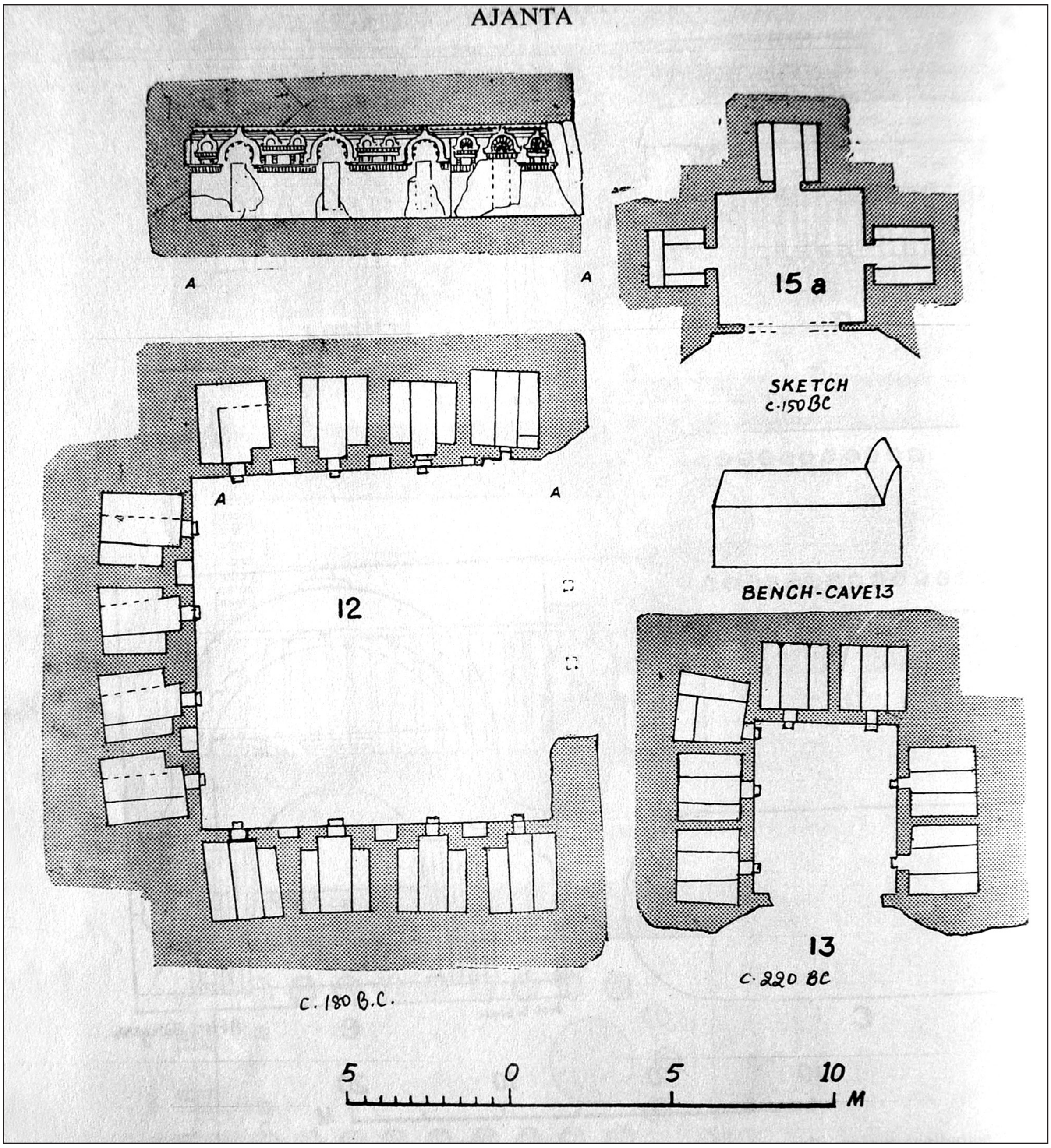
23 Left: *Plans of Caves 9 and 10 (Fergusson and Burgess 1880)*



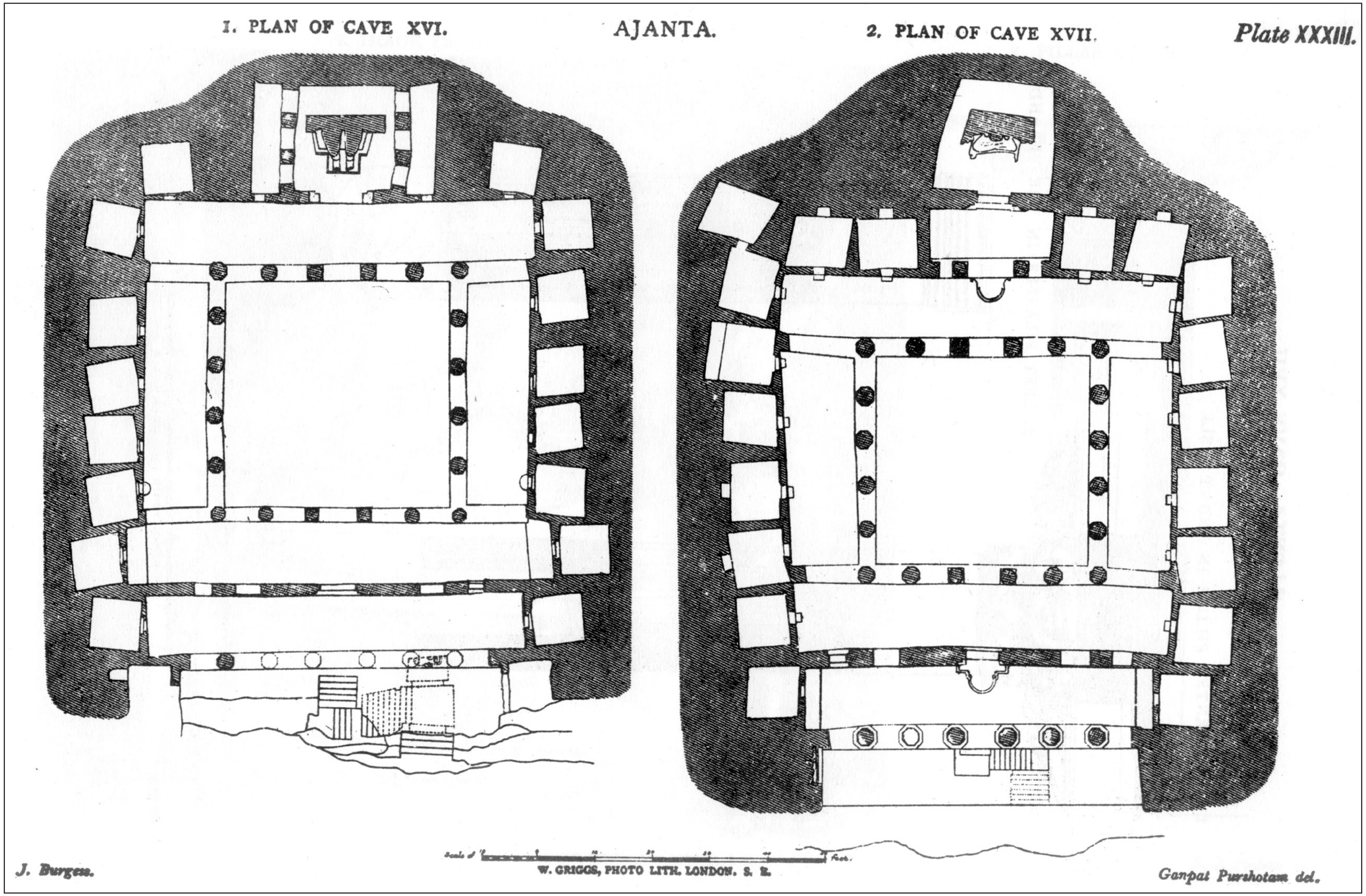
24 *Plans of caves 7, 11, 14, 13, 15, and 20 (Burgess 1883)*



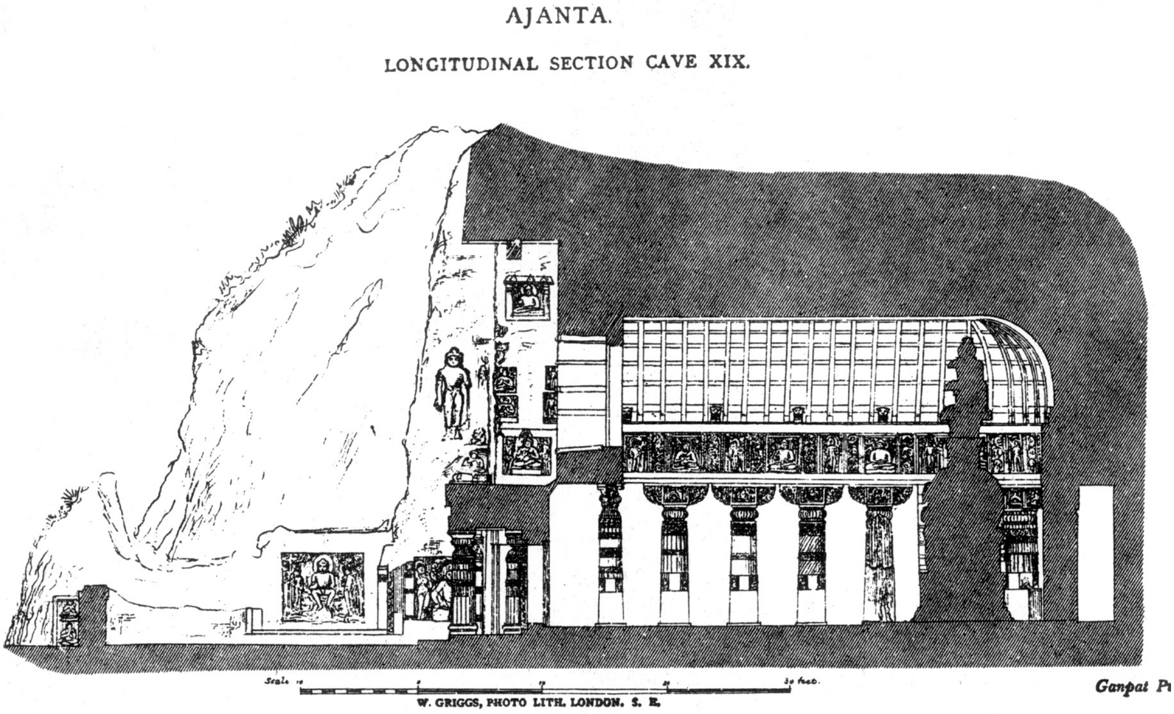
25 Left: *Plan of Cave 11 (Burgess 1883)*; right: *conjectural plan by Spink*



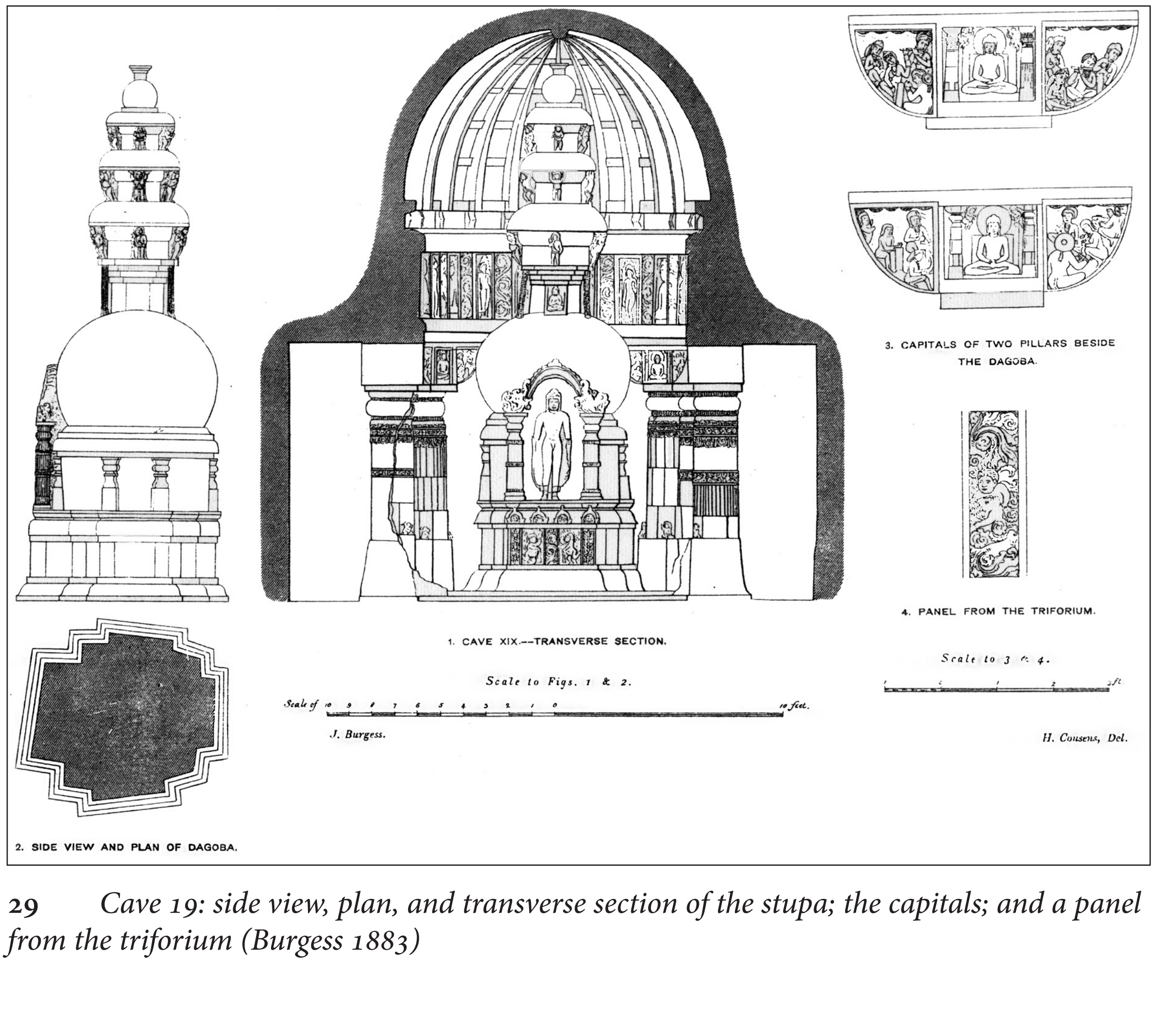
26 *Plans of Caves 12, 13, and 15A (Fergusson and Burgess 1880; Nagaraju 1981)*



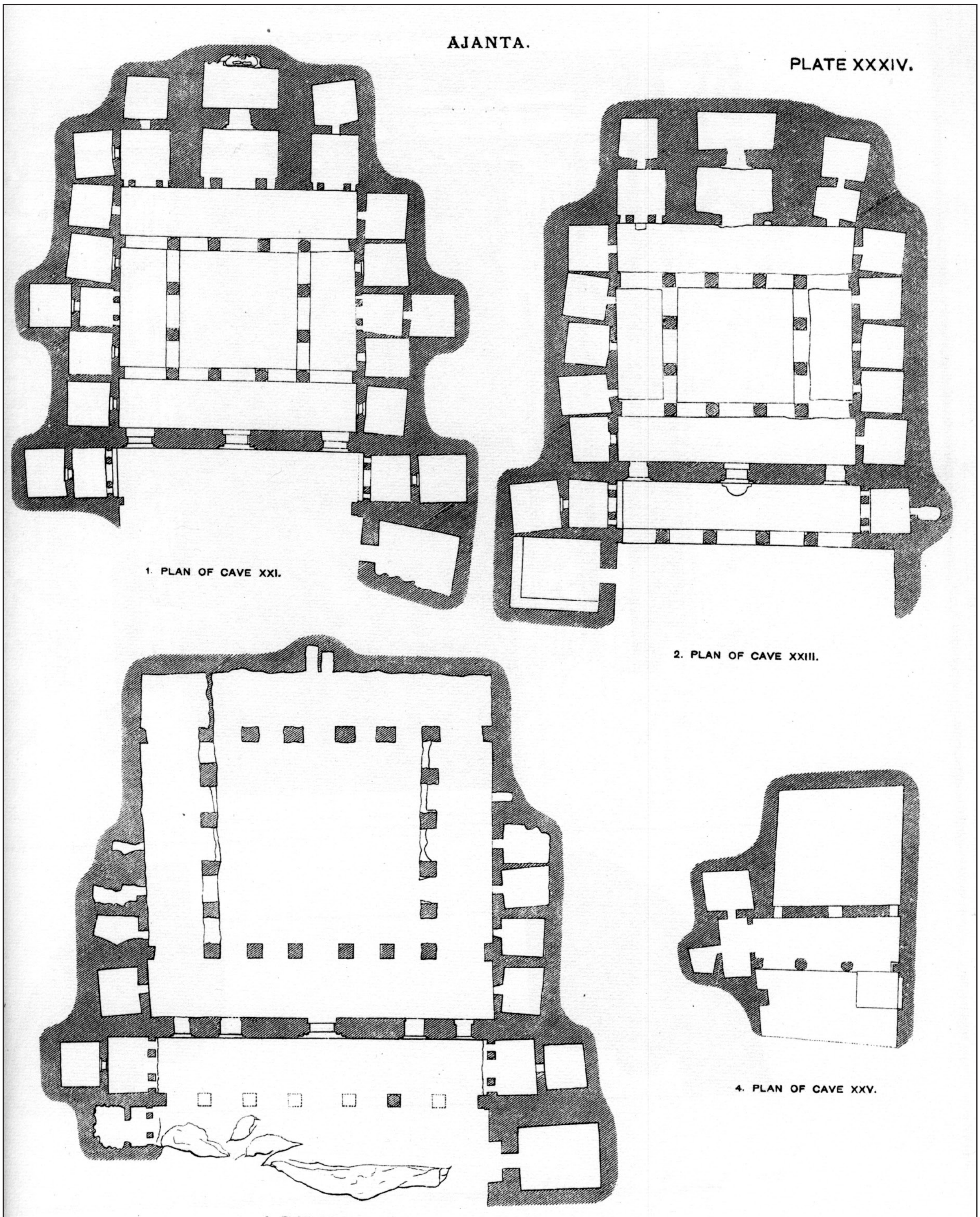
27 *Plans of Caves 16 and 17 (Fergusson and Burgess 1880)*



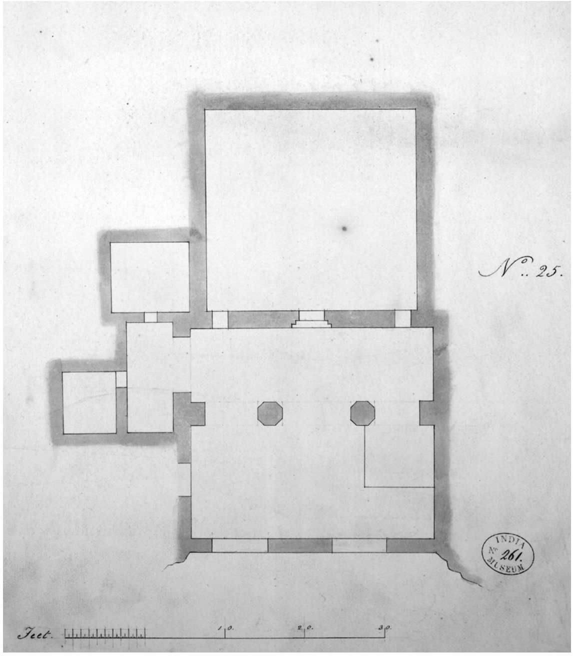
28 *Longitudinal section of Cave 19 (Fergusson and Burgess 1880)*



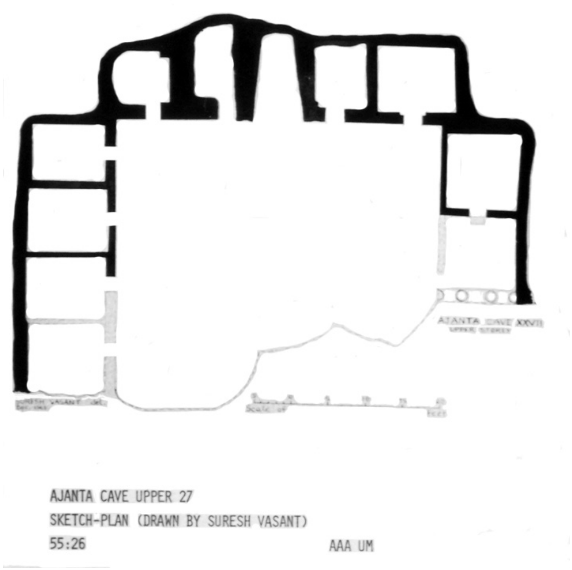
29 *Cave 19: side view, plan, and transverse section of the stupa; the capitals; and a panel from the triforium (Burgess 1883)*



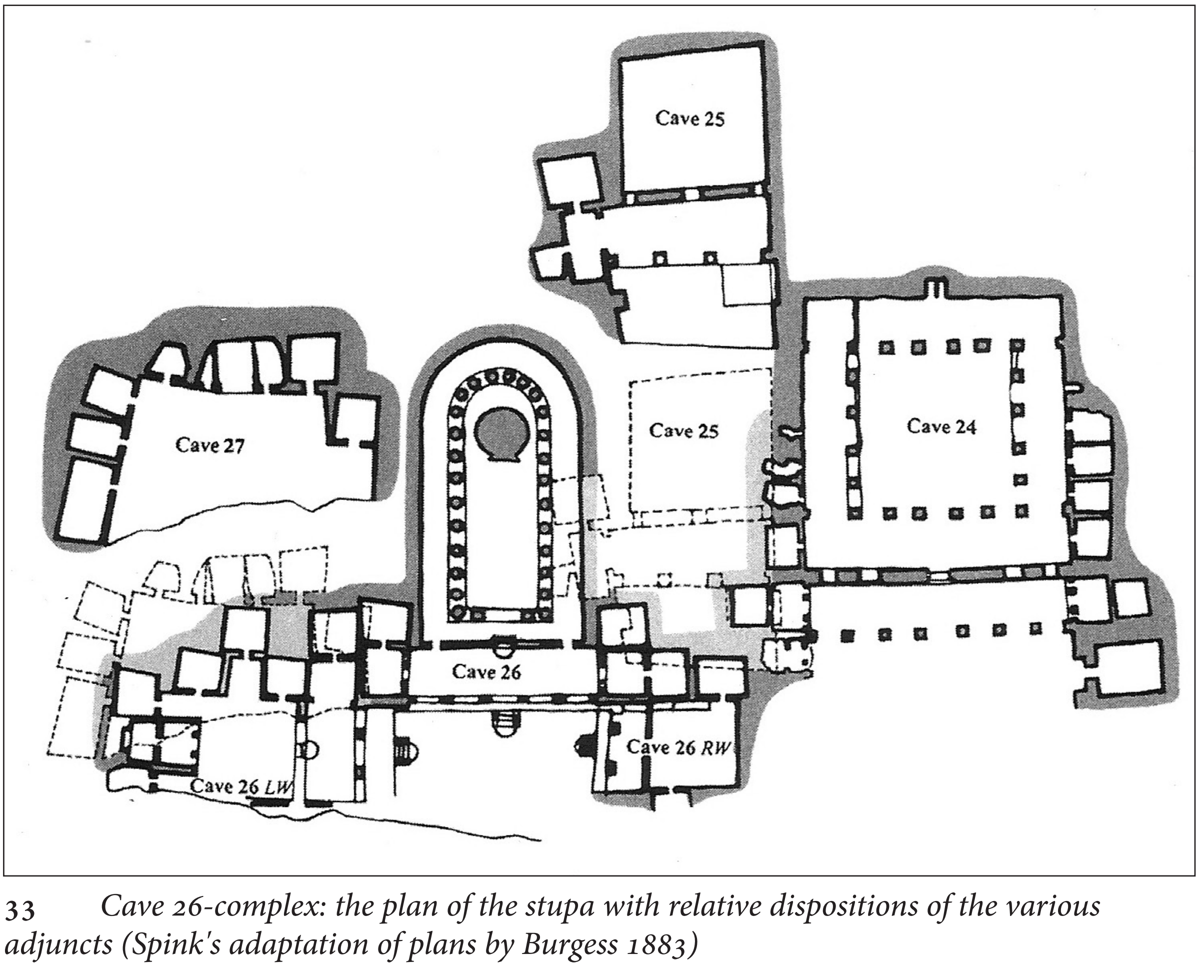
30 *Plans of caves 21, 23, 24, and 25 (Burgess 1883)*



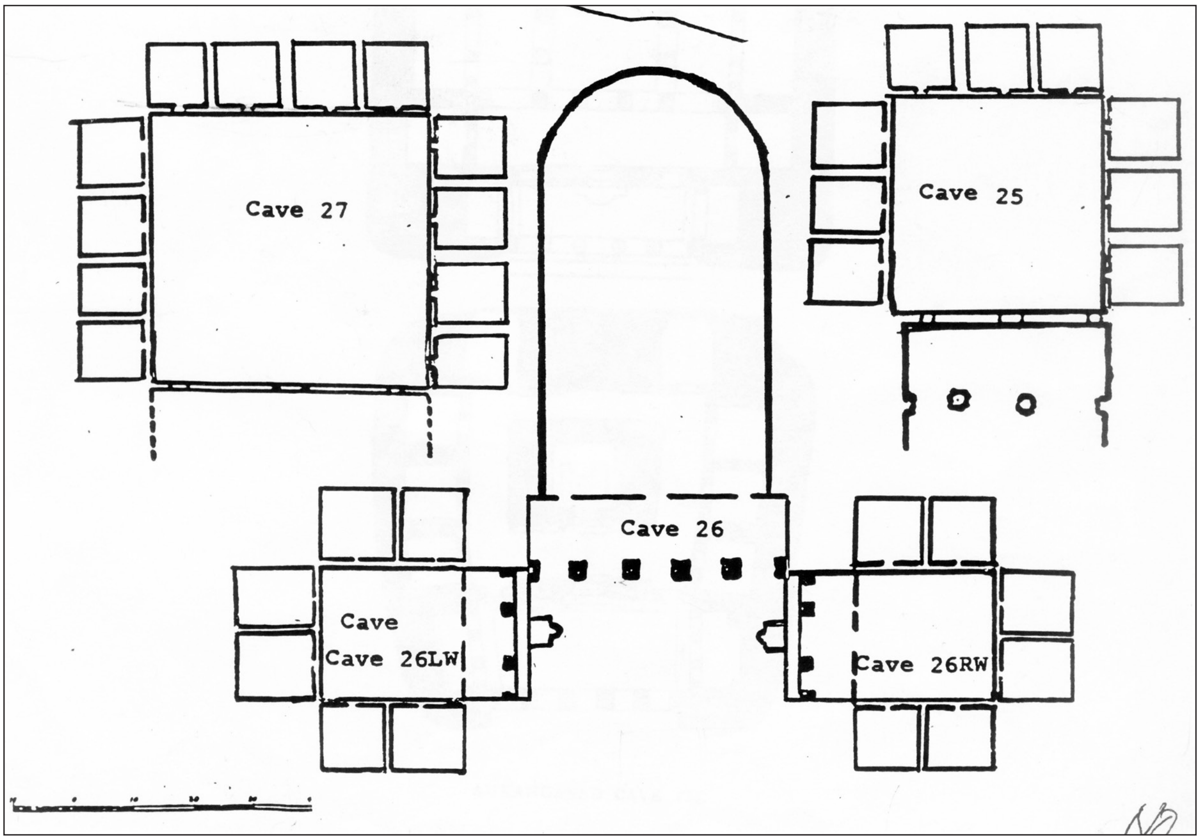
31 *Plan of Cave 25 (Gill 1876). Before the present researcher rediscovered this plan, no one ever realised that Cave 25 had 3 doors in the front court, which give rise to another story of the cave's development than Spink's.*



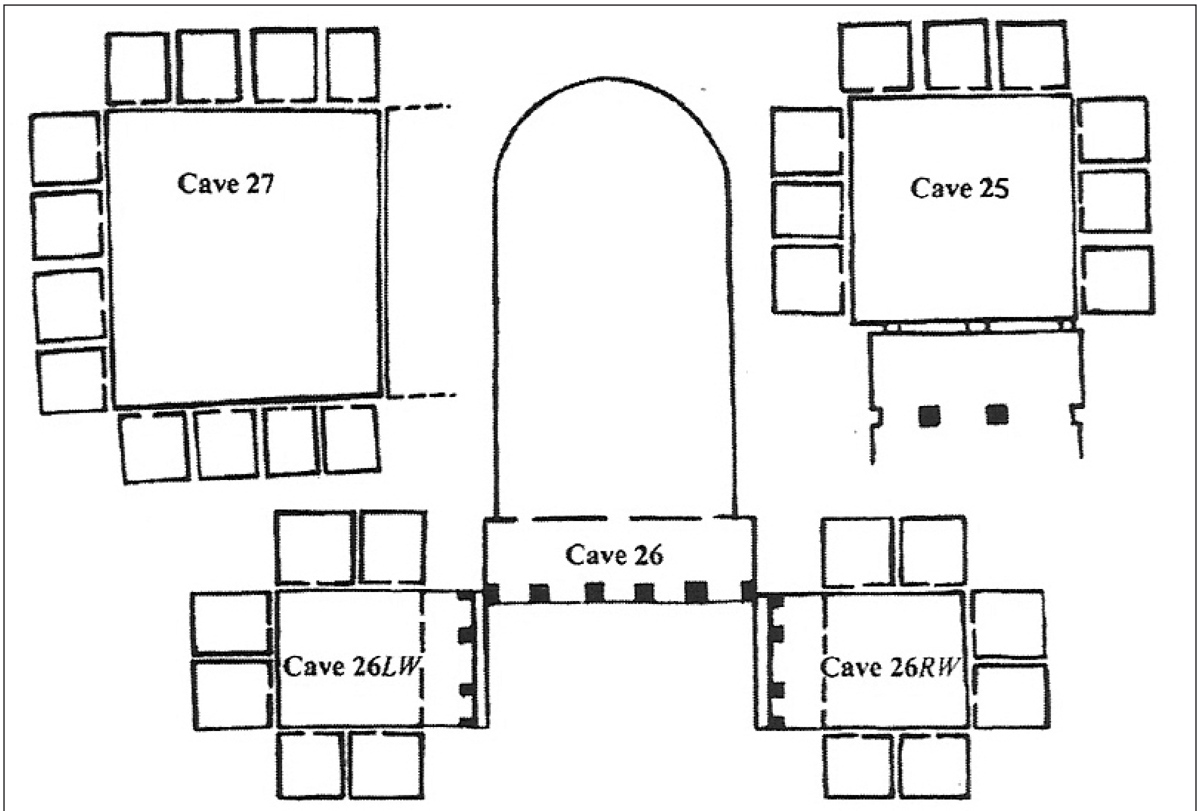
32 *Sketch plan of Cave 27, n.d. by Jadhav (AAA UM, University of Michigan)*



33 *Cave 26-complex: the plan of the stupa with relative dispositions of the various adjuncts (Spink's adaptation of plans by Burgess 1883)*



34 *Plan of Cave 26-complex with the four adjuncts. Spink's first conjectural reconstruction of the disposition of the various components. Here, Cave 27 is facing eastwards to the ravine (Spink 1981)*



35 *Plan of Cave 26-complex with the four adjuncts. Spink's second conjectural reconstruction of the disposition of the various components. Here, Cave 27 is facing northward, in the direction of Cave 25 (Spink 2009, fig. 30)*

 Caves 1, 2, 3, 4, and 5 seen from the 'Viewpoint'

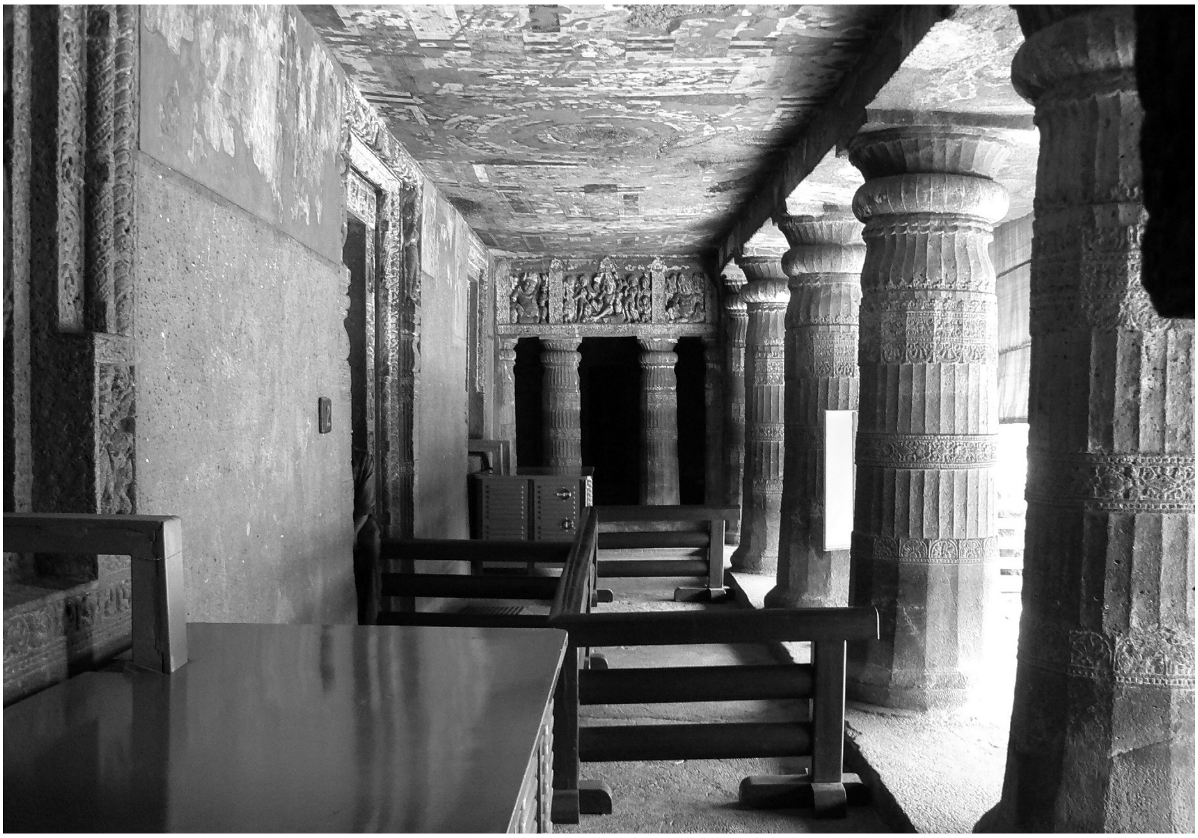
37 *Cave 1, facade*

38 *Cave 1, porch colonnade*

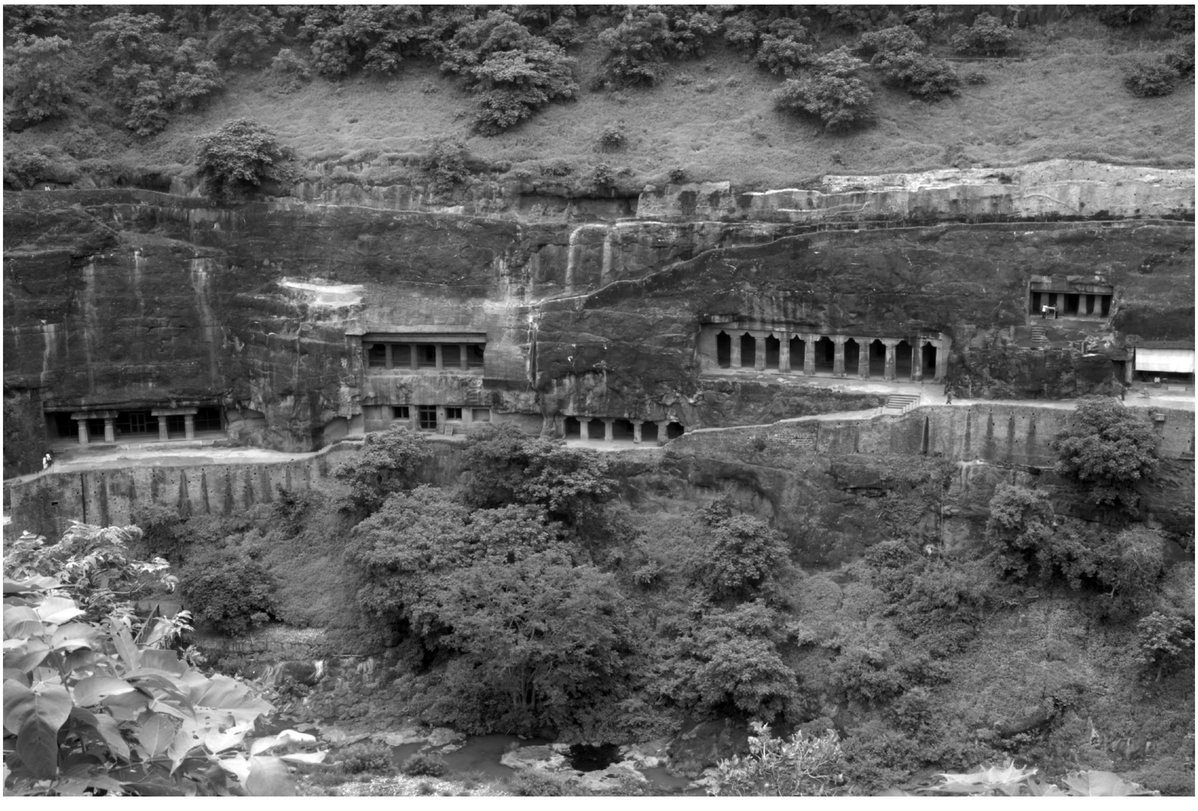
39 *Cave 1, pillared vestibule on the left of the front court*

40 *Cave 1, interior colonnade of the* mandapa

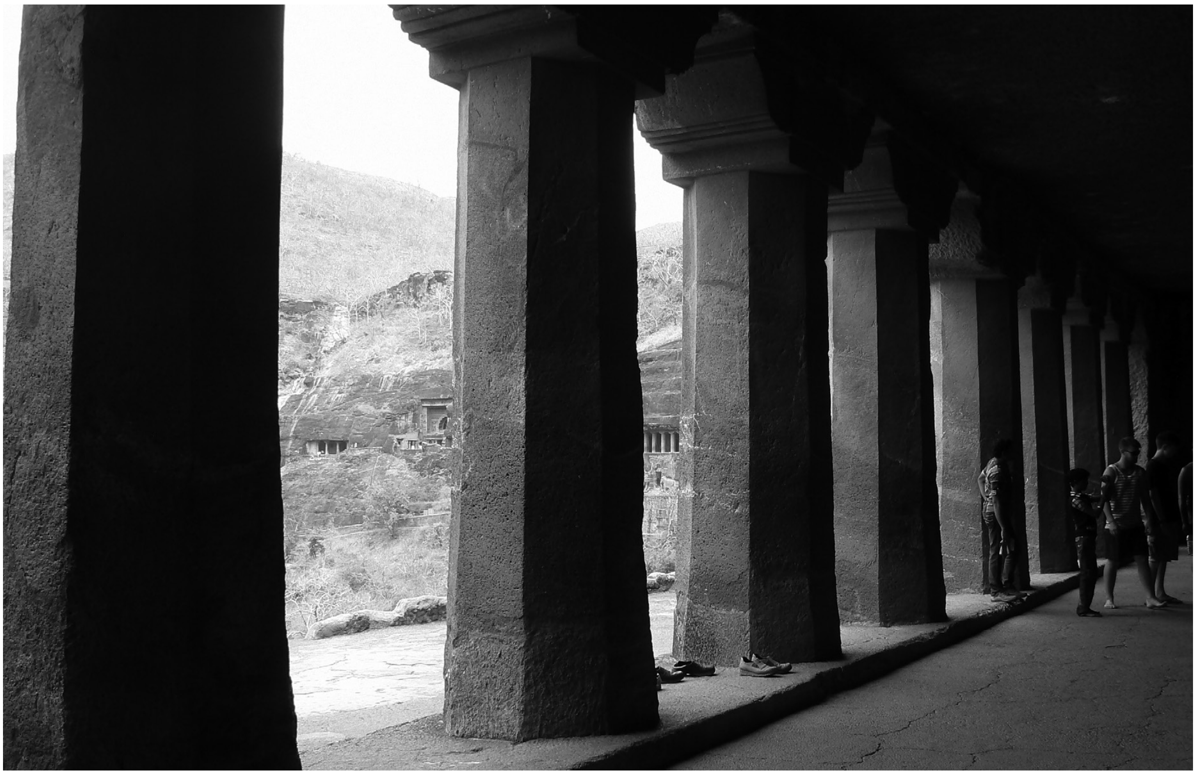
41 *Cave 1, shrine: Spink has not realised that the shrine depicts the theme of the First Sermon that the Buddha delivered to the* pancavargiya-bhiksus *on Asadha Purnima at the Deer Park near Sarnath; a theme depicted in many other shrines and the theme that provided the justification for the astronomical orientation of all the three edifices of the fifth-century phase that were planned and begun as temples from the very start.*



42 *Cave 2, porch*

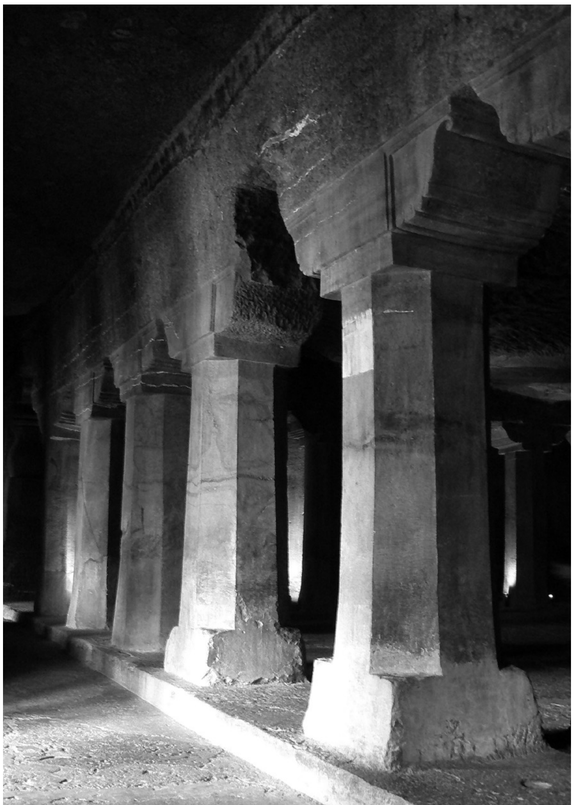


43 *Caves 3, 4, 5, 6U, 6L, and 7 seen from the 'Viewpoint'*

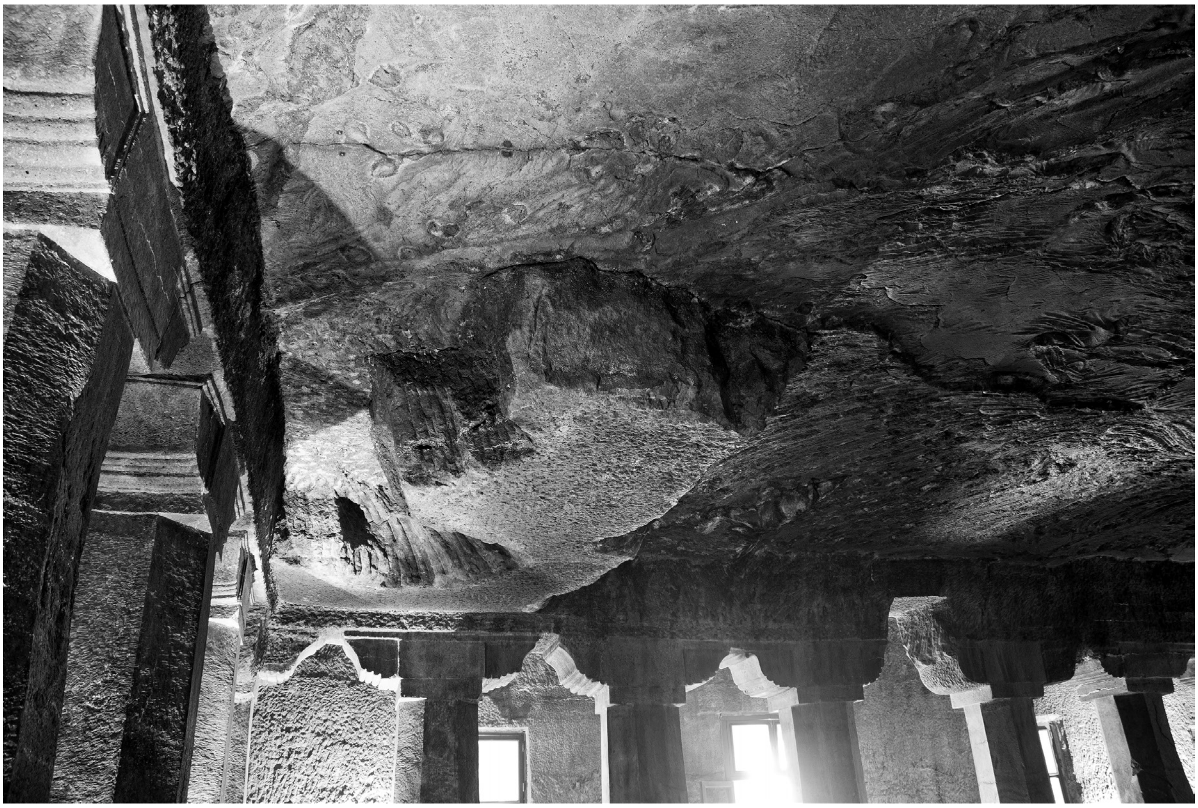


44 *Cave 4, porch colonnade: Spink has not realised that not only the porch but the whole edifice was planned quite smaller. In c. 466 CE extra pillars were added on either side to increase the width, and floors were lowered too for adding the nagas, elephants, yaksas, or lions below the main door jambs. This pattern is also seen in Caves 5, 11, and 16.*

45 *Cave 4, porch*



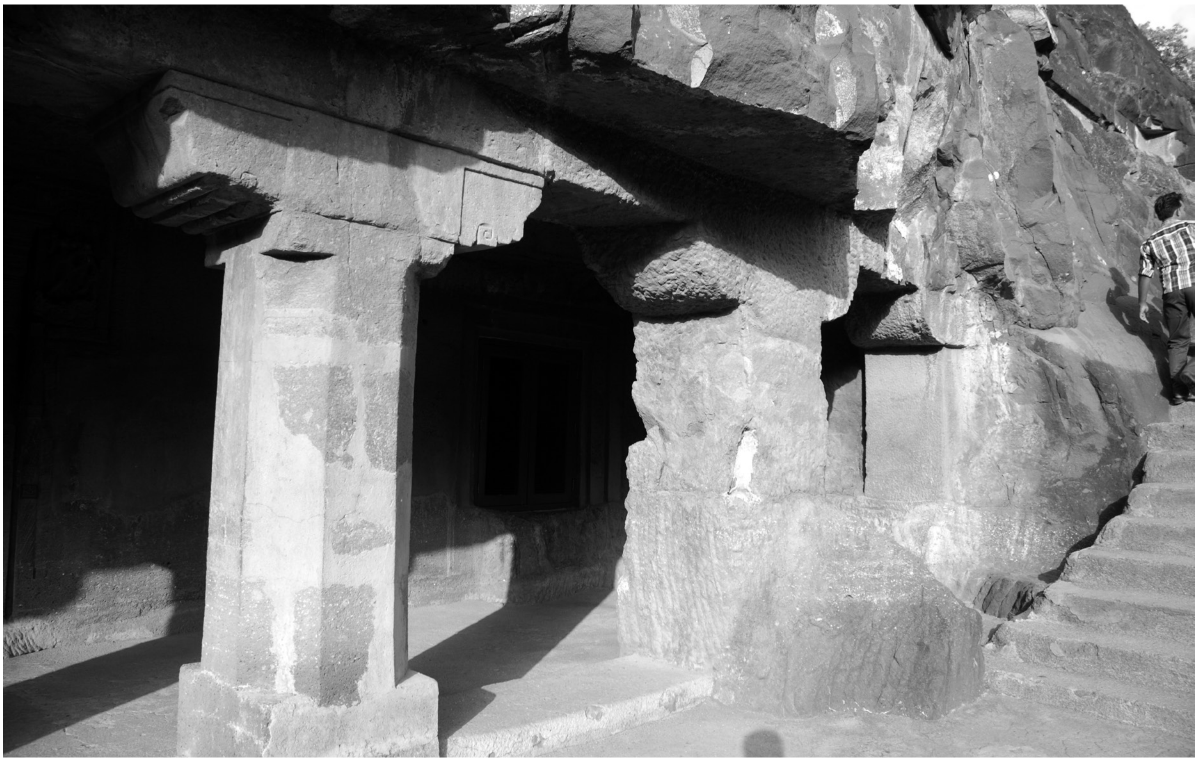
46 *Cave 4 interior, front colonnade*



47 *Cave 4 interior, the original ceiling level before its collapse due to a layer of volcanic lava flow*

48 *Cave 4: Spink has not realised that the shrine Buddha depicts the theme of the First Sermon, seen in many other caves too.*

49 *Cave 4: Spink has not realised that while the pancavargiya-bhiksus are seated on the left, the group of upasakas on the right is probably the donor (Mathura's) family who are characterized by royal hairdo, ornaments, and outfits. Most votive Buddha figures at Ajanta are similarly attended by the donor's family.*

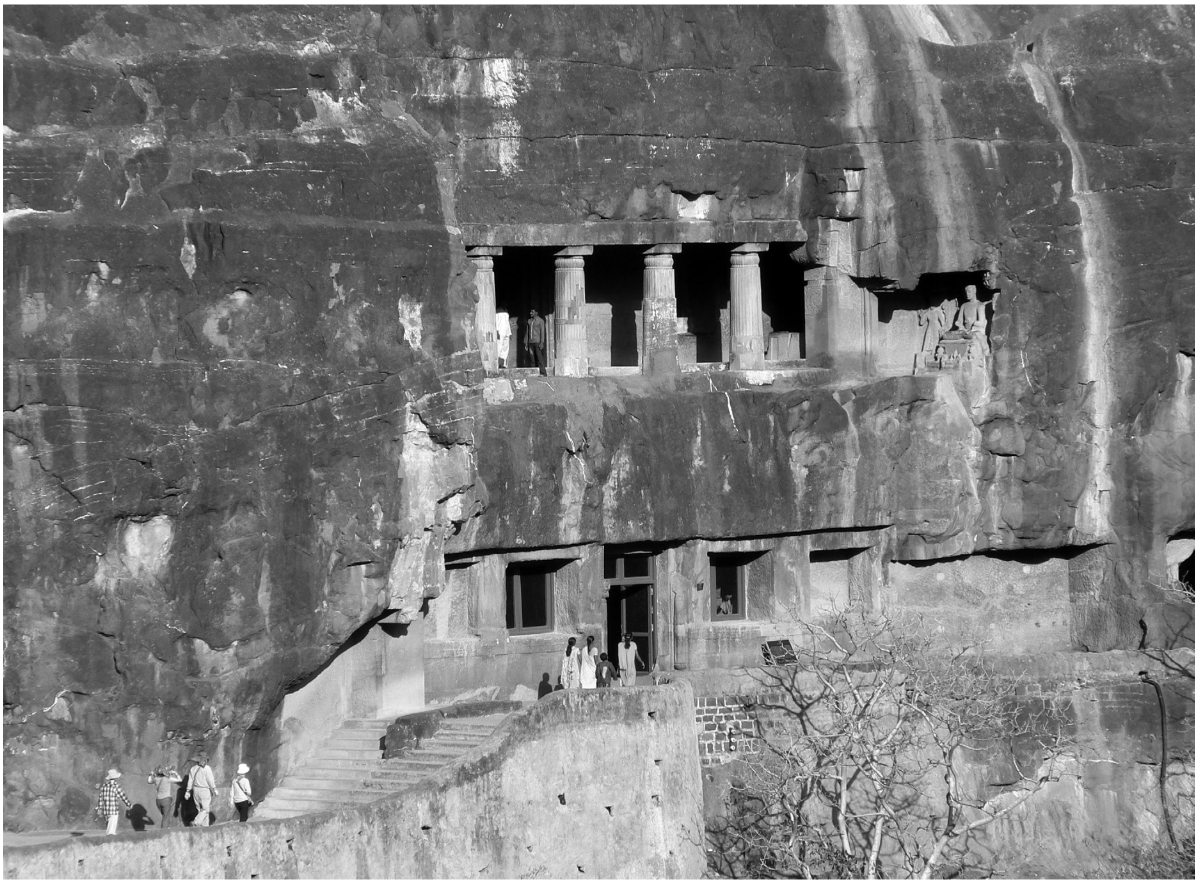


50 *Cave 5 porch, right side: Spink has missed the evidence, which indicate that it was originally a two-pillared porch. The additional two pillars were added during c. 477 CE to increase the dimension of the cave. Similar attempt had successfully been made in many other caves, e.g. caves 4, 16, 17, etc.*

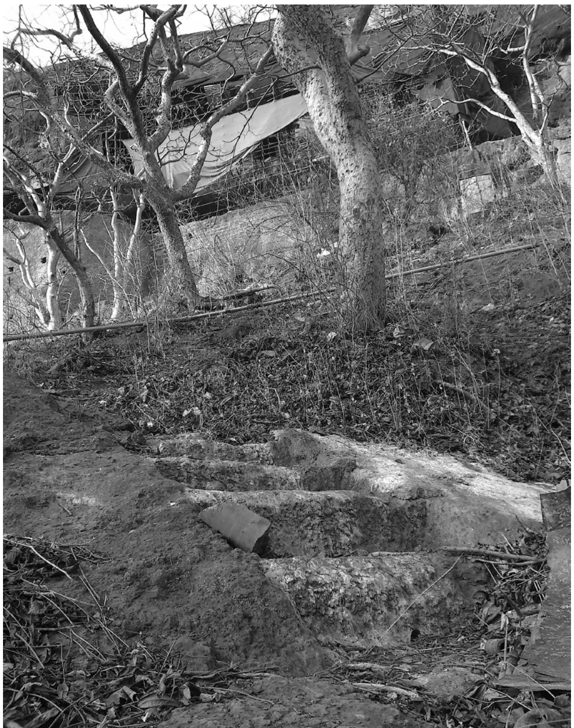
51 *Cave 5: the staircase from Cave 4 seems to encroach upon the space of the front court due to the widening of the porch in c. 477 CE.*

52 *Cave 5: in c. 477 CE when the porch was being widened, this matrix of rock on the floor could never be removed due to sudden death of Harisena.*

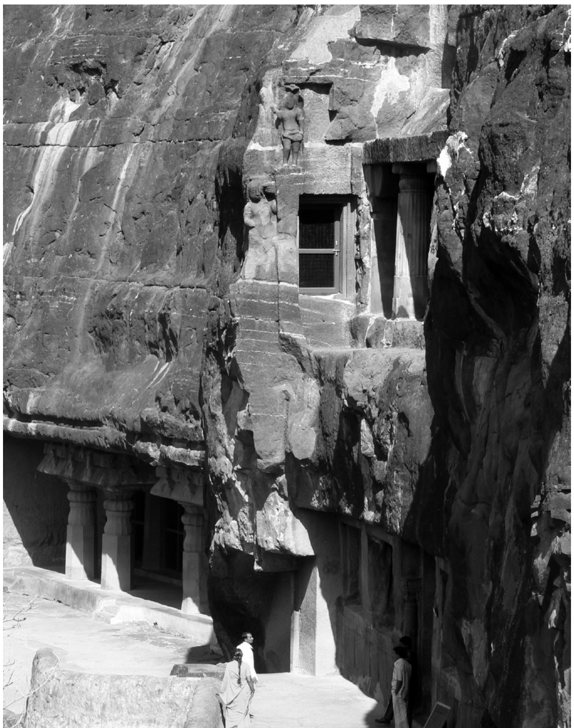
53 *Cave 5, right of porch. This entire area was gained in c. 477 CE when the porch was widened.*



54 *Caves Lower 6 and Upper 6: there was a four-pillared porch before Cave L6 above which existed the front court or terrace of Cave U6.*

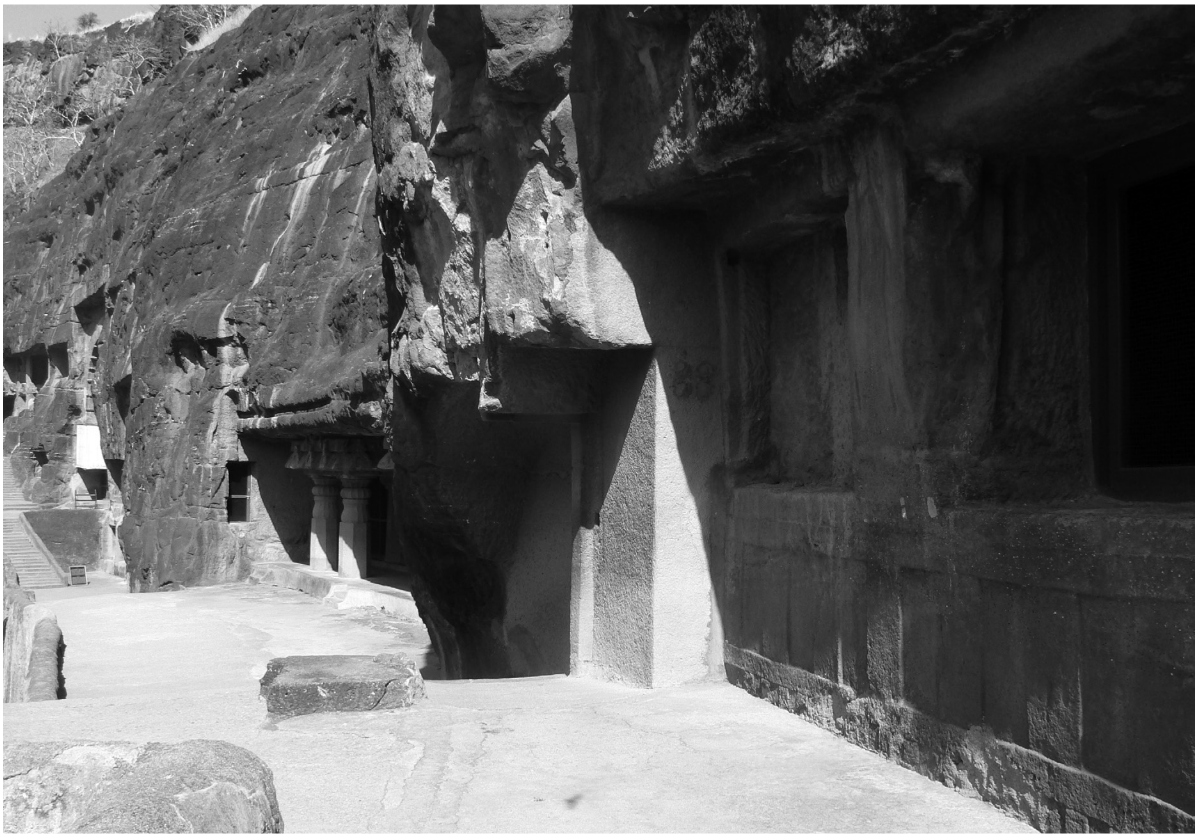


55 *Cave 6: the extant remains of the flight of steps from the river bed*

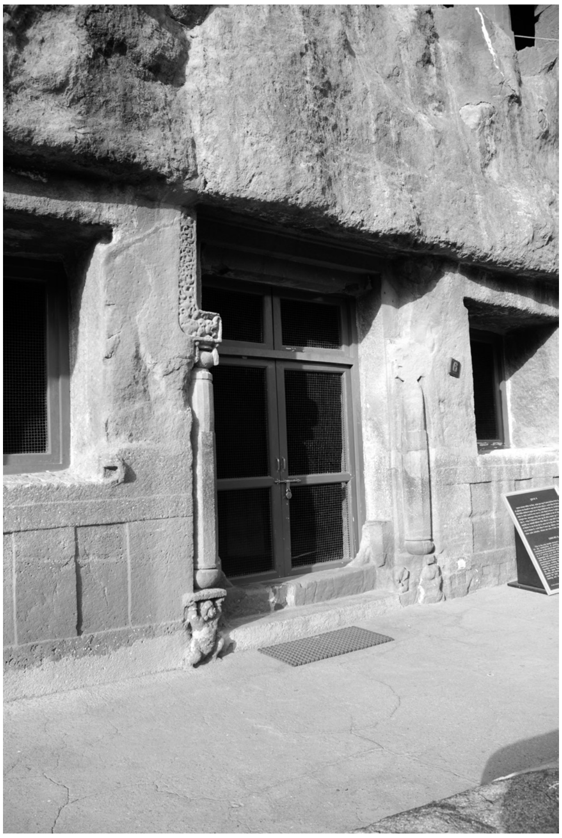


56 *Caves Lower 6, Upper 6, and 7*

57 *Caves Lower 6 and Upper 6: on the front left side is seen the extant portion of the tunnelled staircase that connected caves 7 and Lower 6. Probably Cave Lower 6 had a four-pillared porch. Spink has not realised that the porch was likely damaged in c. 464 CE when the work was still underway.*



58 *Cave Lower 6: this is the area where a four-pillared porch likely existed, which was likely perished in c. 464 CE when the work was still underway.*



59 *Cave Lower 6: rear wall of the perished porch showing the main doorway*

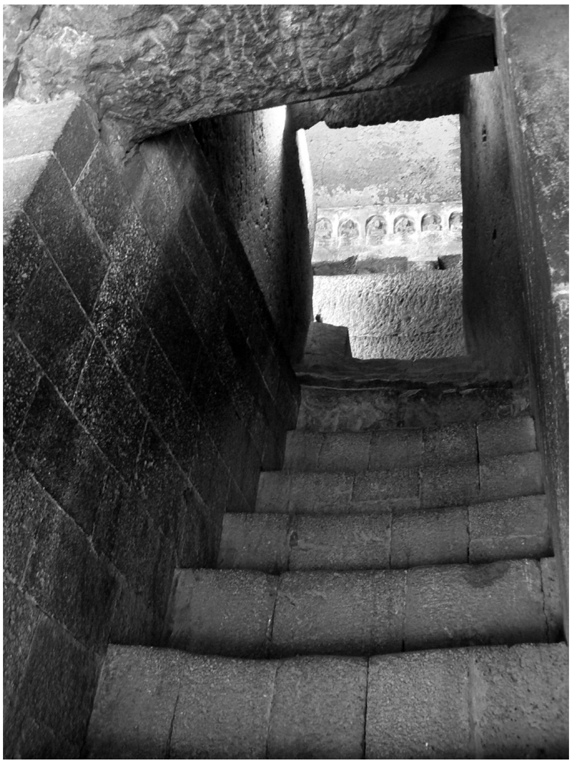
60 *Cave Lower 6, main doorway: lose river goddesses that were once affixed on upper parts are now missing*

61 *Cave Lower 6, main doorway: the elephant and yaksas lifting the pillars were probably carved in c. 466 CE under the plan of converting the* upasraya *into a temple.*

62 *Cave Lower 6: evidently there was a tunnelled staircase here that was not originally planned in c. 462 CE. It was worked out in c. 464 CE when the pillared porch and the original flight of steps from the river bed were damaged in a likely rockslide.*

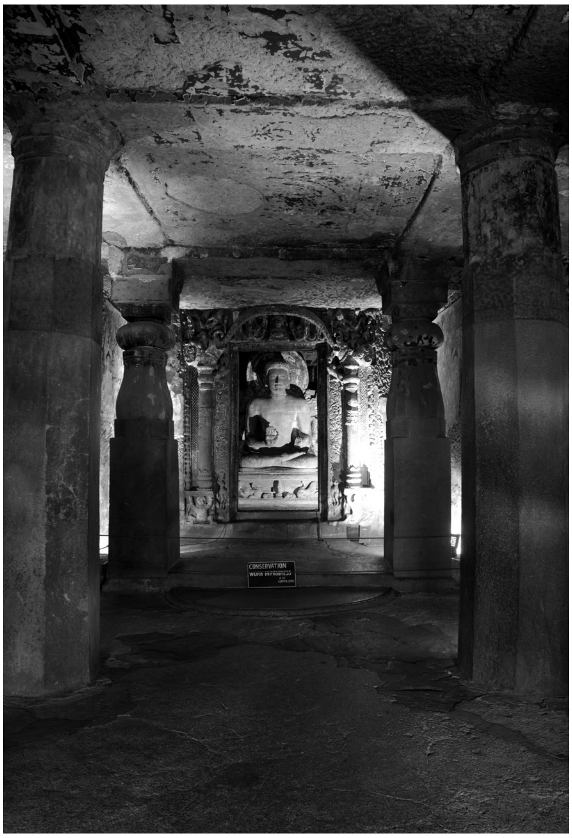
63 *Cave Lower 6, tunnelled staircase: traces of plaster are extant; double doors were fitted on the tunnel's doorway, which opened toward the porch.*

64 *Cave L6, interior, front ailse: the staircase is not a monolith, indicating that there was no plan for the upper storey.*



65 *Cave L6: constructed staircase for reaching the upper storey*

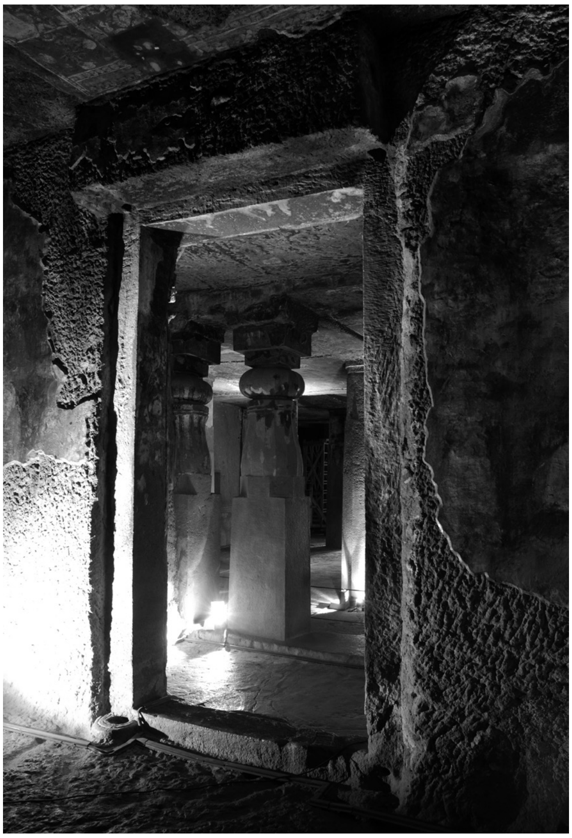
66 *Cave L6: the cracks, fissures, and crystal formations on the ceiling level*



67 *Cave L6: hall. It was originally planned without any pillar or shrine.*

68 *Cave L6, shrine doorjambs: these decorative motifs were not concieved when the shrine was concieved*

69 *Cave L6: the shrine Buddha does not depict the scene of the First Sermon*

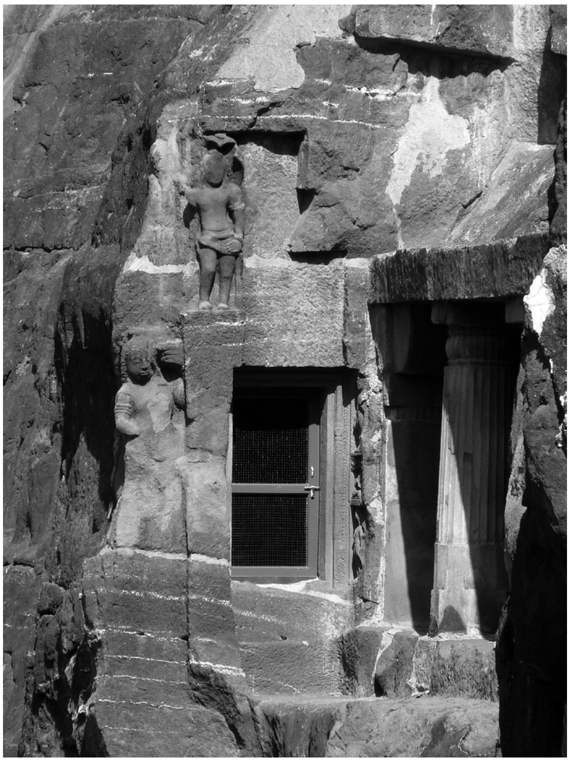


70 *Cave L6, shrine doorway: double doors opened toward the interior*

71 *Cave L6, shrine doorway: the massive oblong cube of rock held the massive wooden double doors; the only other place of its occurance on the site is Cave 20.*

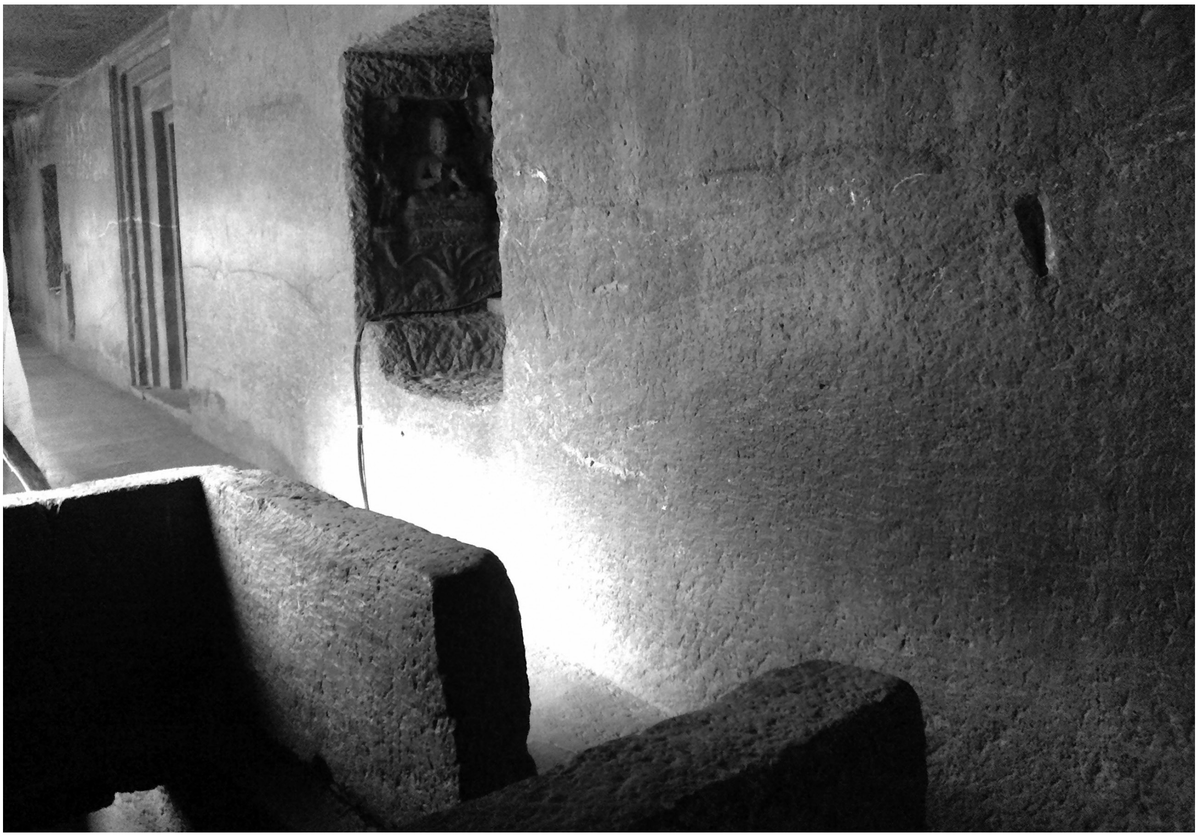
72 *Cave L6, shrine painting: the ceiling has preserved some of the finest yet least cited examples of decoative paintings at Ajanta*

73 *Cave Upper 6: now reconstructed, the porch pillars were heavily damaged. The upper storey evidently had a front court, balcony, or terrace that stood above the porch of the lower storey.*

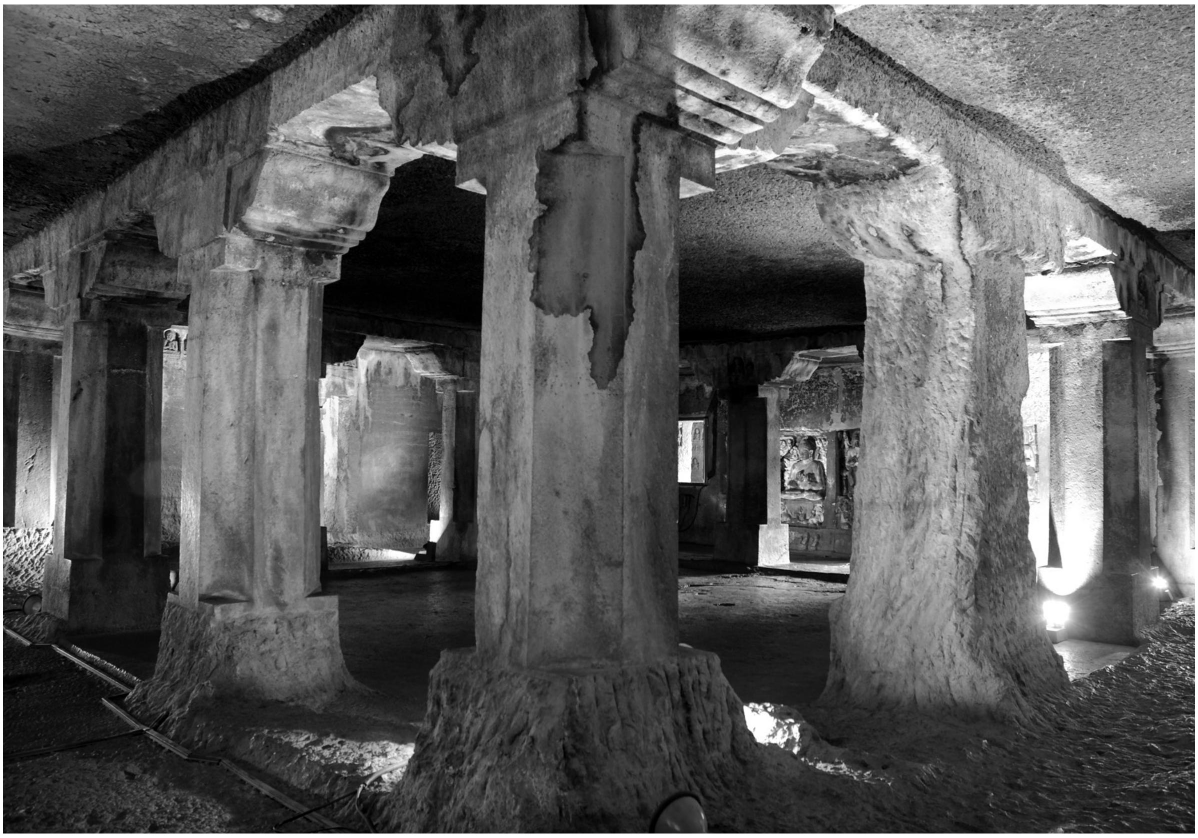


74 *Cave U6: the seldom-noted yaksa and naga dvarapalas as flag bearers, which must have had identical counterparts on the opposite side*

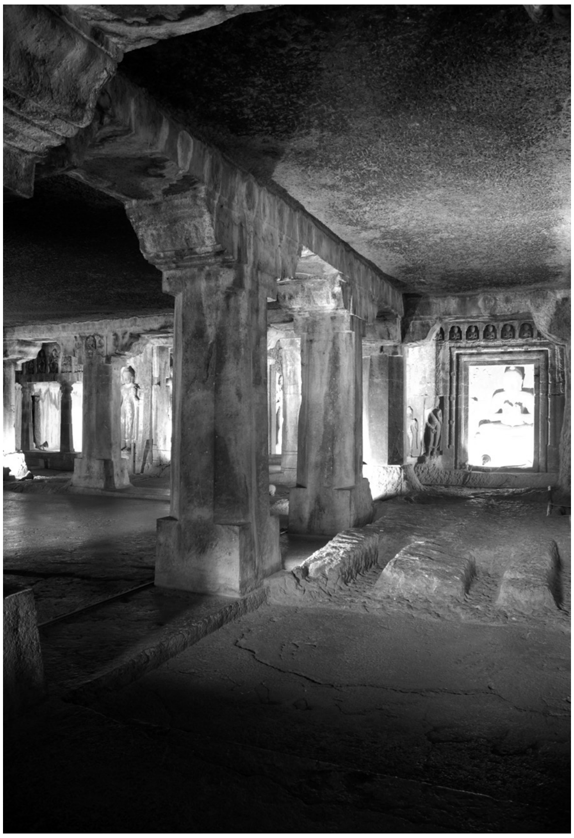
75 *Cave U6: the monolithic enclosure round the staircase coming up from the hall of the lower storey*



76 *Cave U6: the monolithic enclosure coming up from the hall of the lower storey. It suggests that connectivity with the lower storey was established when the porch here was being cut; but the connectivity did not exist when the lower story was being excavated.*

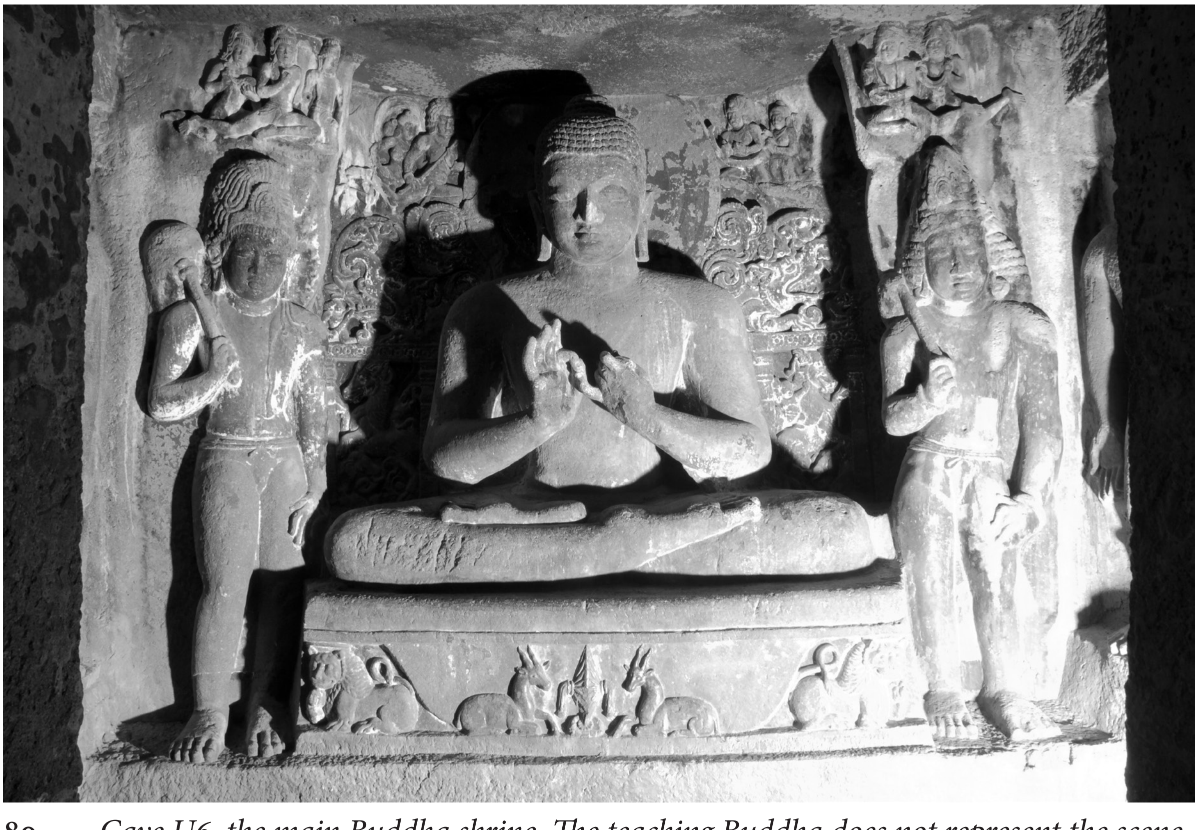


77 *Cave U6, hall: the typical square-shaped colonnade with the typical octagonal pillars havng square bases is totally unrelated to the plan on the lower storey.*

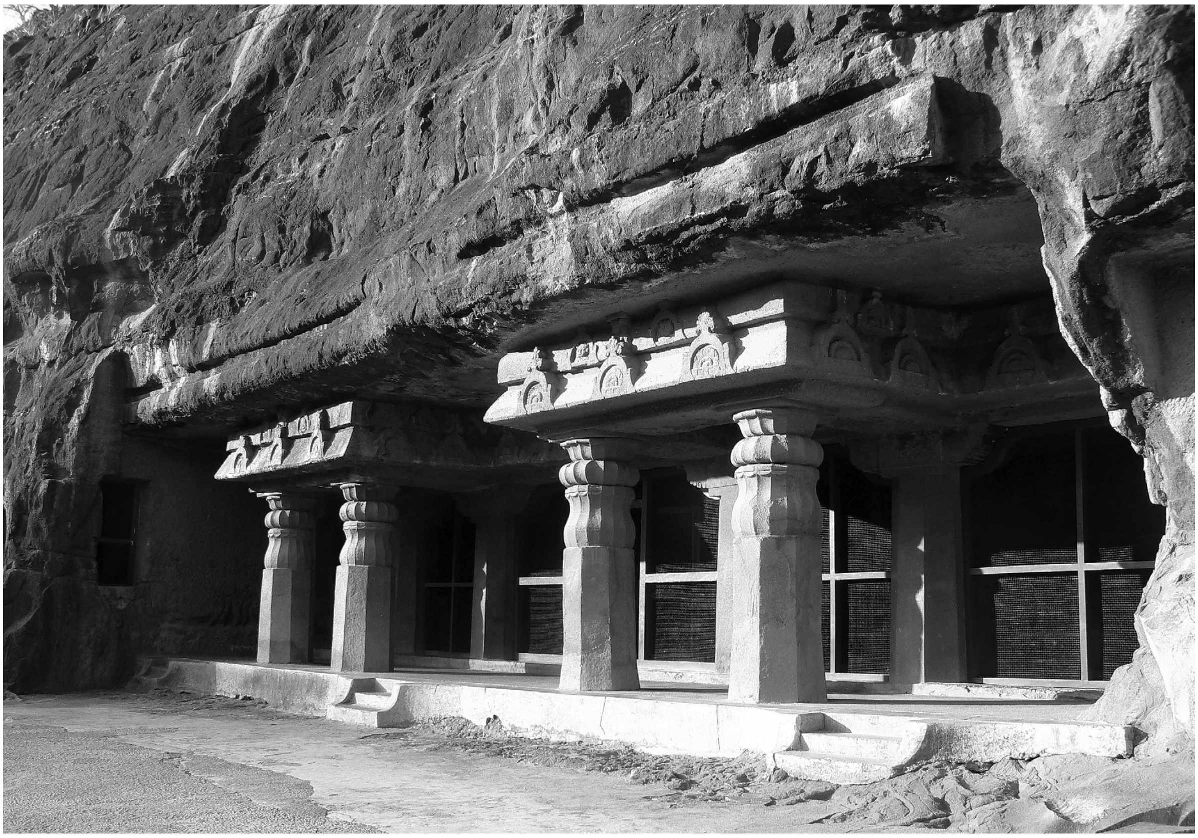


78 *Cave U6: the uncut floor area in the right aisle indicates abrupt abandonment of work*

79 *Cave U6, interior side-shrine: this is the only cave with 5 completed Buddha shrines (and more were being planned!)*



80 *Cave U6, the main Buddha shrine. The teaching Buddha does not represent the scene of the First Sermon, indicating that the scene of the First Sermon for the main Buddhas was not yet conceived at the site when this shrine Buddha image was carved.*



81 *Cave 7, facade: the double portico motif is unique at the site. Spink does not realise that most of the initially concieved upasrayas shared a common plan without any decorative theme. Perhaps Cave 7 was concieved later.*

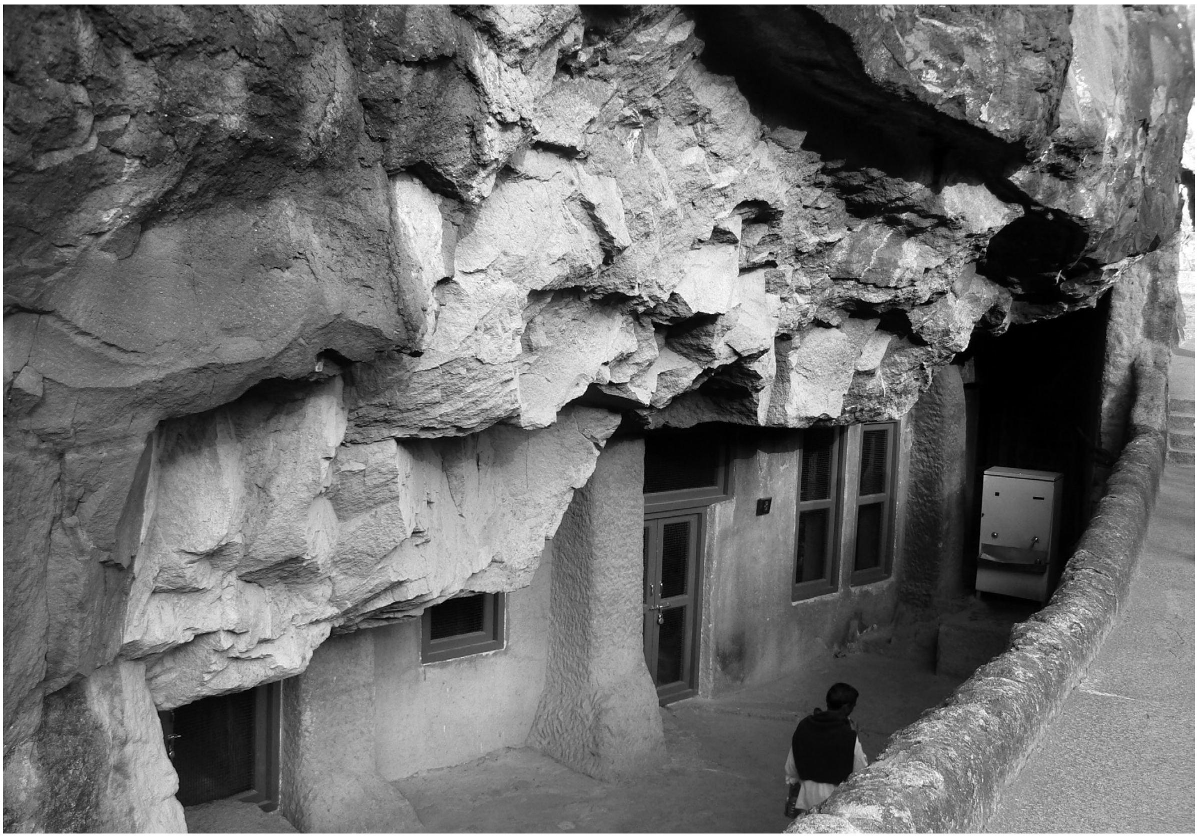
82 *Cave 7, lintel of a portico: the yaksa who carries a stupa in his hands is seated in the centre of the portico; he is the presiding deity and the guardian of the entrance. While he welcomes the faithful, he guards the edifice from satanic forces.*

83 *Cave 7, porch: such an expansive porch anticipates an equally large hall. However, there is no hall in this mandapa, making it an exceptional case at the site.*

84 *Cave 7, porch: traces of paintings on the wall. The cells on the porch's rear wall are exceptional at Ajanta. At this location, they suggest that the plan of the hall was discarded by the time the workers had not even exposed the full depths of the porch.*

85 *Cave 7: this unusual location of the shrine with antechamber is testimony of a terrible incidence that must have gripped the development of this edifice, which forced the planners to abandon the idea of the hall.*

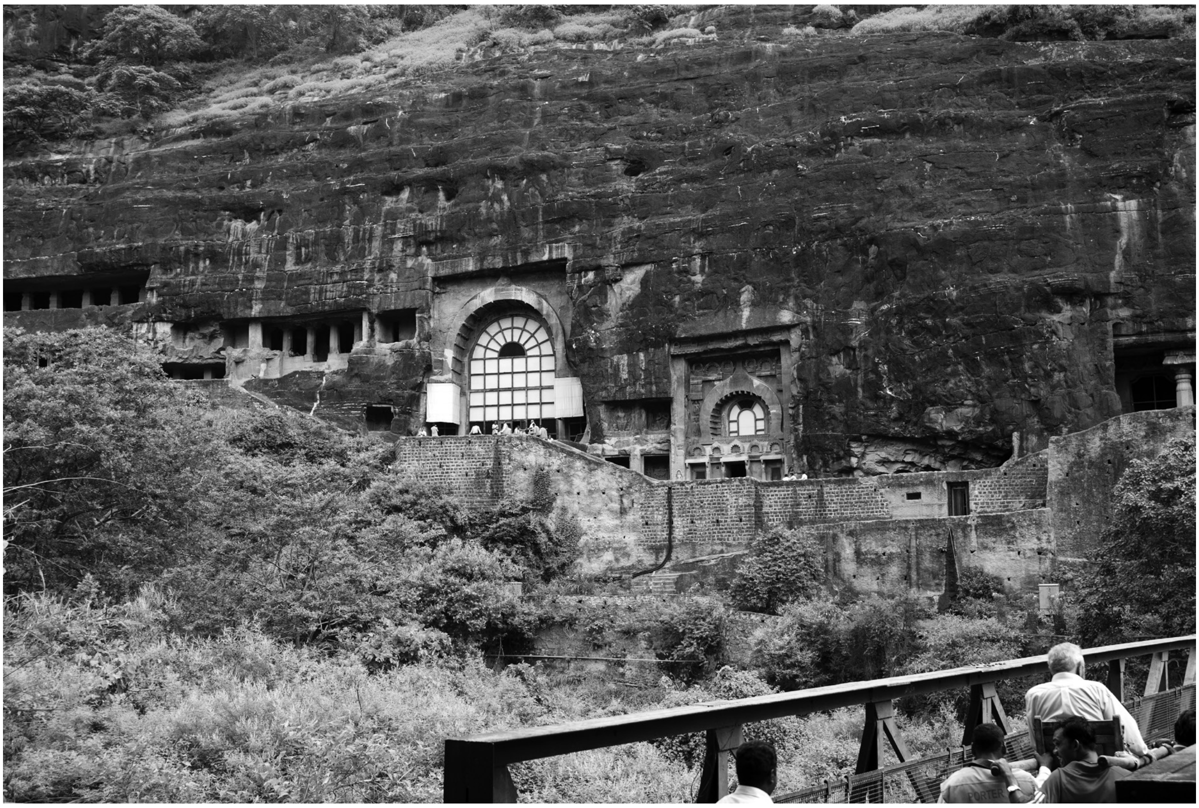
86 *Cave 7: the very existence of a spacious antechamber here indicates that this shrine was not among the earliest to have been initiated on the site, as the earliest of the shrines, e.g. Caves 11 and 16 have no antechamber at all.*



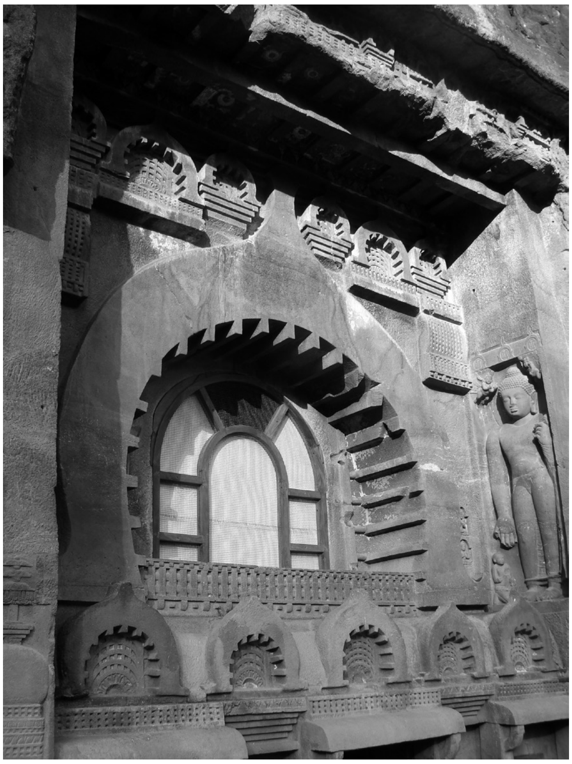
87 *Cave 8: perhaps there was a pillared porch, now completely perished without any trace*

88 *Cave 8, interior: the electric generator machines inside the cave (date of photograph: August 2013)*

89 *Cave 8, hall: the cave is used like a store room (date of photograph: August 2013)*



90 *Caves 9-10: the Satavahana-period caves (circa 2nd-1st c. BCE) flanked by other caves of the fifth-century CE phase*

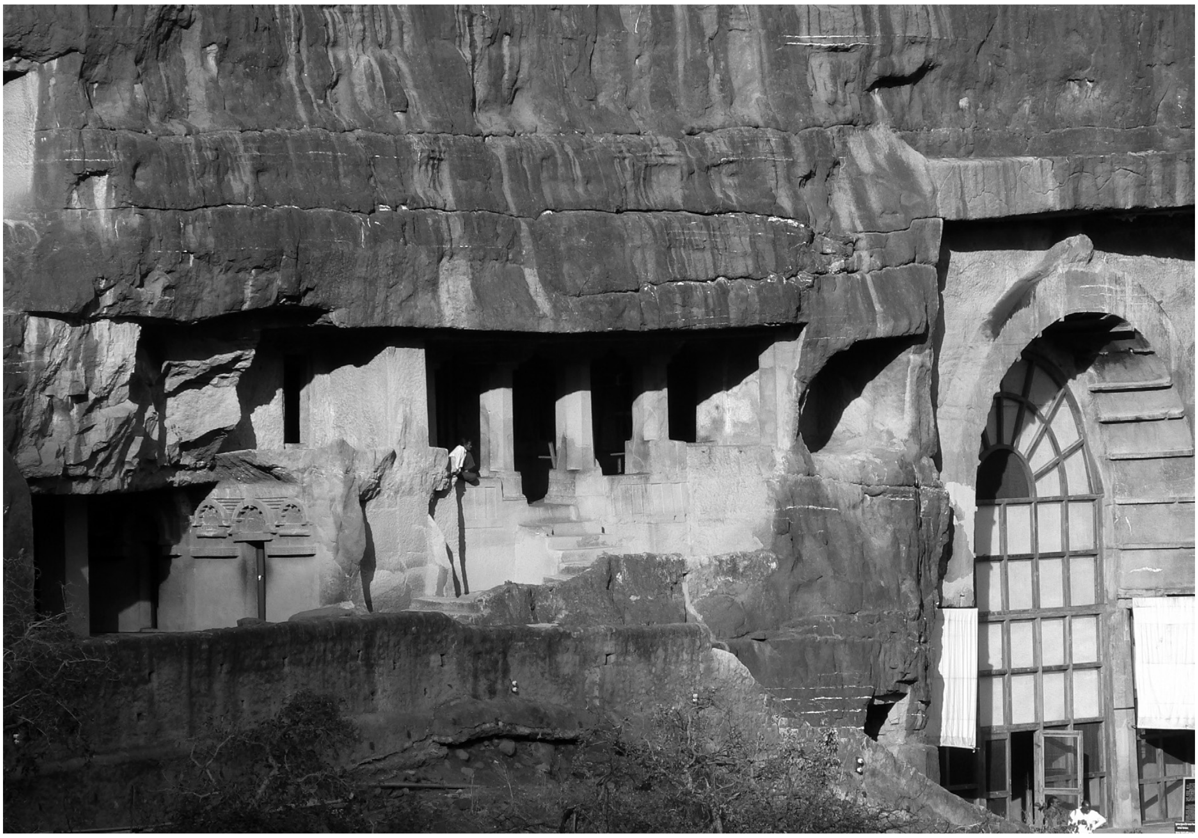


91 *Cave 9, facade: evidently there was a wooden jaali and other decorative fixtures fitted on the grand arch*

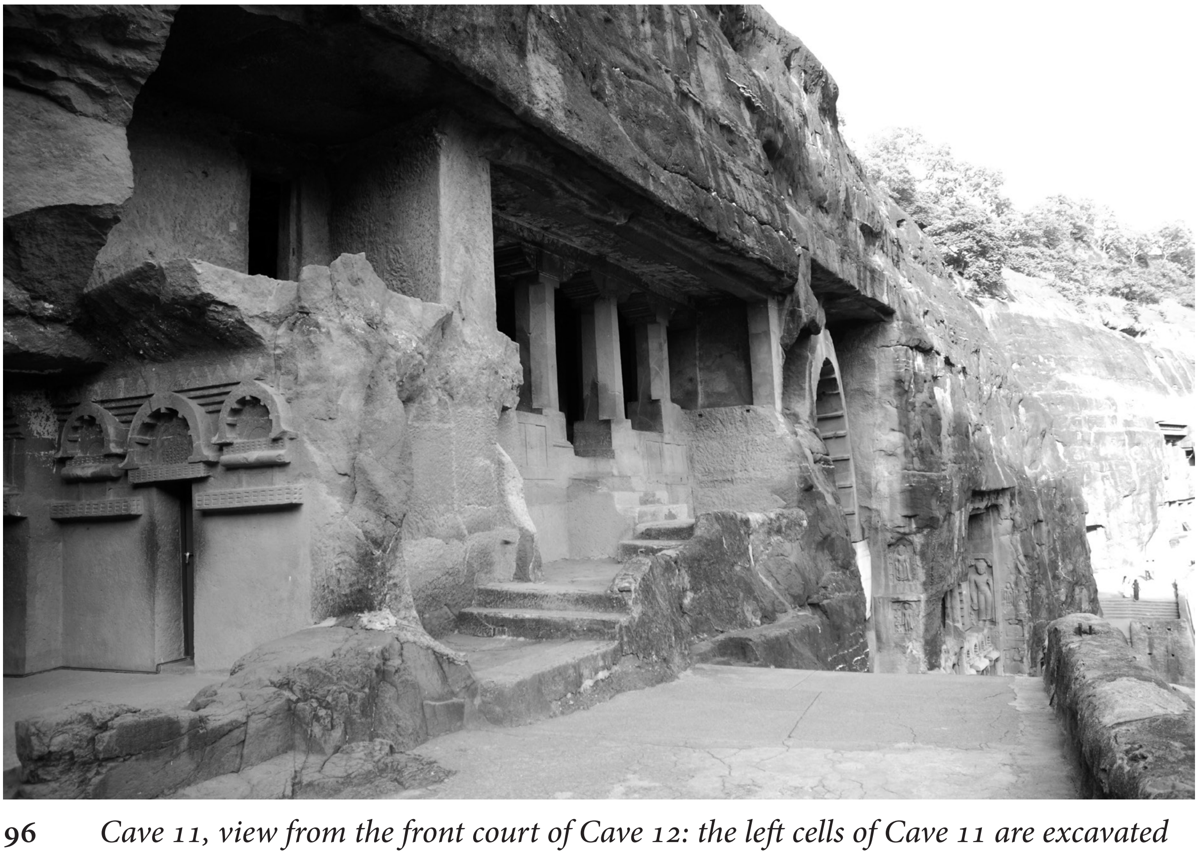
92 *Cave 9, interior*

93 *Cave 10, interior*

94 *Cave 10, right outer surface of the great arch: the inscription reads: "*vasithiputasya kathahadino gharamukha danam*" (the wooden face of the house donated by the son of Vasistha)*

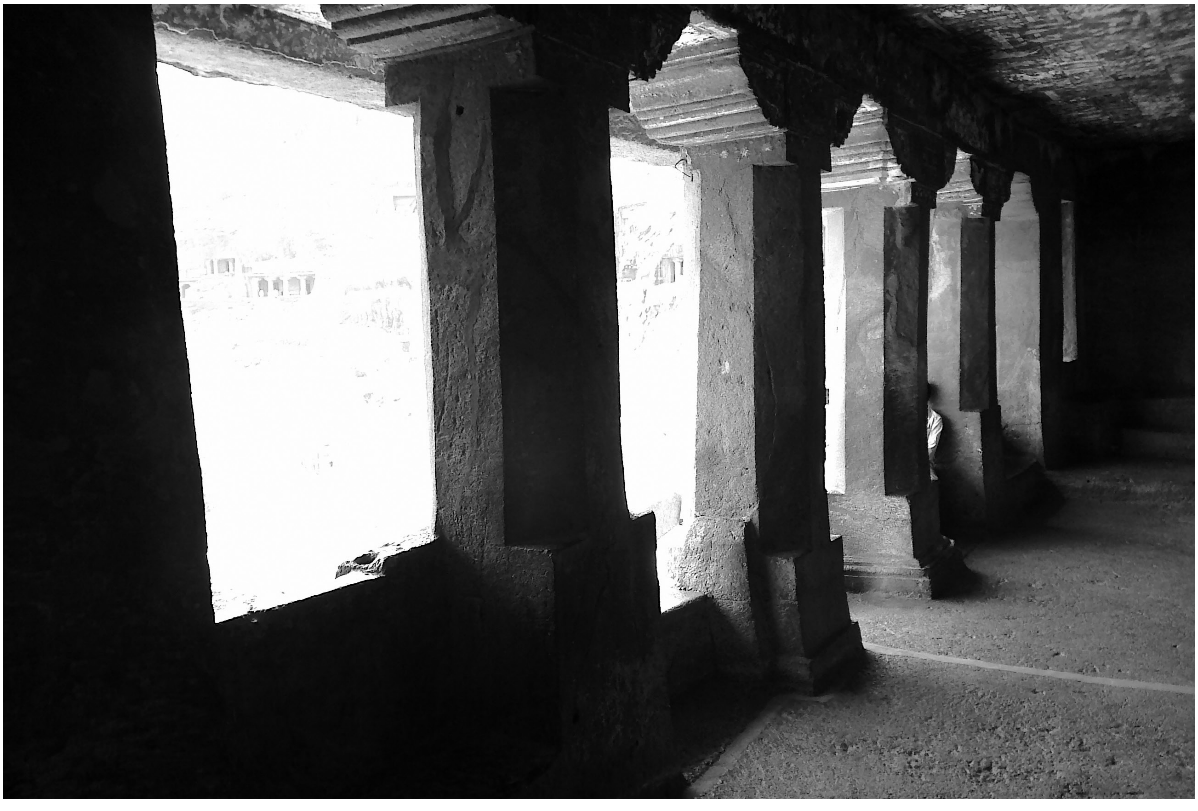


95 *Cave 11, front view. Spink has not realised many curious features and evidence preserved in this cave that give rise to a story of the cave's development that is notably different from his understanding of what happened here.*



96 *Cave 11, view from the front court of Cave 12: the left cells of Cave 11 are excavated on top of Cave 12. They are not on the same level as the porch floor. This was to save the ceiling of Cave 12, which suggests that the cells were not part of the original plan.*

97 *Cave 11: this left out cell perhaps indicates that the staircase to reach the cave did not spring from here (the steps in the photo are apparantly incorrect cement reconstruction). The original staircase landed right in front aligned to the axis of the cave (perished now).*



98 *Cave 11, porch: this is the only edifice at Ajanta that has monolithic enclosures between the porch pillars, which is obviously for safety reasons, and not surprisingly, since the porch is several feet high from the floor outside.*

99 *Cave 11, porch: work here progressed in many phases, and plans changed dramatically from time to time; the edifice rather became a laboratory for experiments.*

100 *Cave 11, porch, proper left side: the monolithic enclosure between two pillars*

101 *Cave 11, porch, proper right: the monolithic enclosure between two pillars*

102 *Cave 11, porch, axial pillar bases*

103 *Cave 11, porch, proper left axial pillar base: the multiple tiers of mouldings on the sides of the adhisthana*

104 *Cave 11, porch, proper right axial pillar base: the single pattern of flat moulding on the sides of the adhisthana*

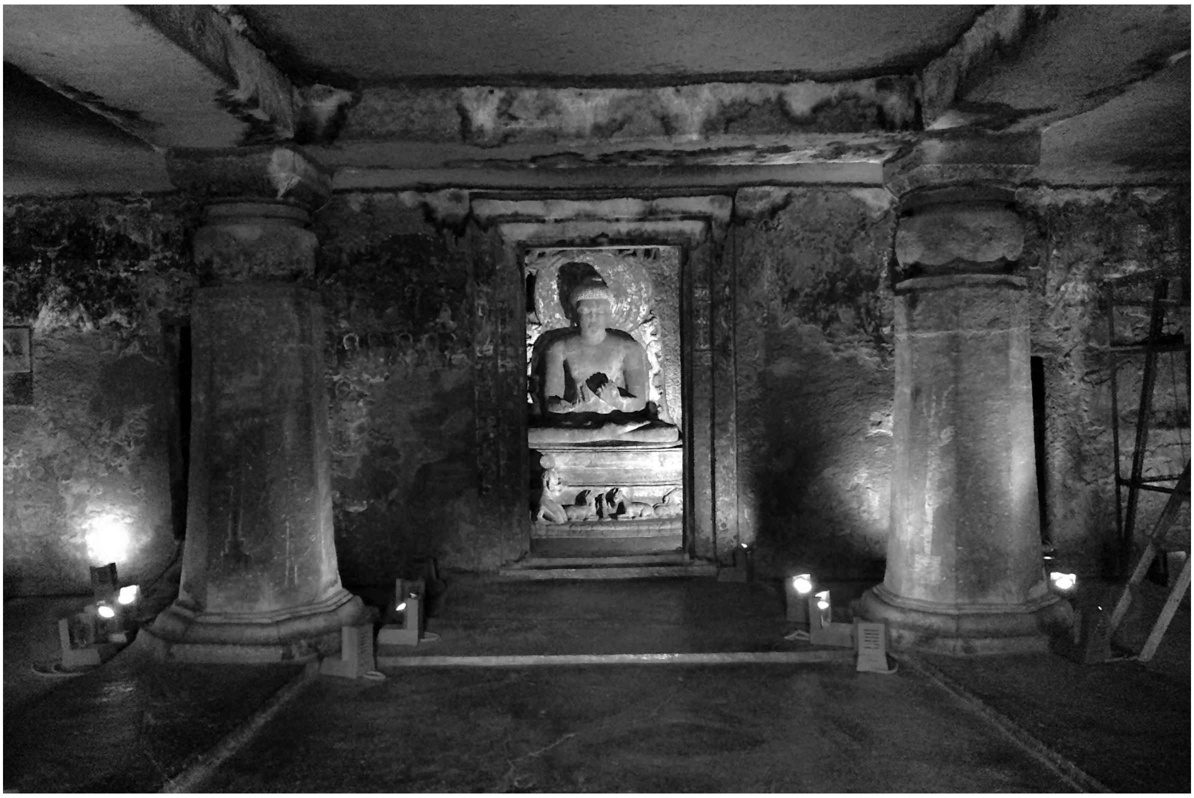
105 *Cave 11, porch, proper left side: monolithic bench between pillars*

106 *Cave 11, porch, proper left side: notice the raised floor level and the steps before the cells, carefully planned to save the ceiling of Cave 12 underneath the floor.*

107 *Cave 11, simha-dvara: the lions effectively provide the 'simha-dvara' theme to the main doorway. Originally in c. 462 CE, when the edifice was merely an upasraya, these lions were neither needed nor expected. However, in c. 466 CE, when the the plan emerged to convert the upasrayas into temples, the idea of such thematic doorways (simha-, yaksa-, naga-, gaja-dvara, etc.) emerged. The lions required the floor to be cut down further by 2.5 ft.*

108 *Cave 11, right porch window: this is the only cave at Ajanta with double pillars in the windows. Moreover, while the right window has circular pillar type, the left window has square window types. The asymmetry tells a story, i.e. the left window was carved in c. 462 CE while the right window was carved in c. 465-466 CE.*

109 *Cave 11, porch, left window: in c. 462 CE when the upasraya had begun and was excavated deep inside, the windows were carved for lighting, just as it was in Cave L6. Here an experiment was added by the introduction of the square pillars. However, the designs belong to a late date.*



110 *Cave 11, pillared hall with shrine: notwithstanding the small dimensions of the hall, four pillars were planned from the start, which is unlike the plan of other contemporary caves, e.g. L6, 15, 27, which were planned far bigger but astylar.*

111 *Cave 11, pillars and floor-beams: just like the left window pillars, the hall pillars too were apparantly square without adhisthanas and floor beams in the initial plan.*

112 *Cave 11, interior pillar, adhisthana: it is this cave where the first adhisthana of Ajanta was attempted. The attempt was first tried on the two axial pillars of the porch. Thereafter, a more developed form was pronounced here in the four interior pillars.*

113 *Cave 11, interior pillar, ghatapallava motif: again it is this cave where the first such motif was tried at Ajanta. The large vessel with small leaves arranged round its brim is the earliest pronouncement of a new idea. In the course of time, this motif becomes complex and sophesticated, as e.g. in the outer court shrines of Cave 19.*

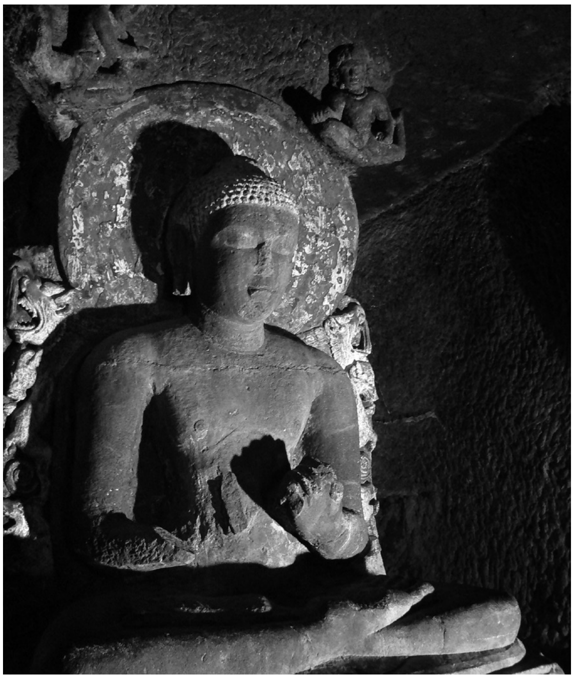
114 *Cave 11: steps before cell doorways tell a story of thier own. This one is among the earliest attempts.*

115 *Cave 11: the one before the next cell doorway is more skillfully done*

116 *Cave 11: the next cell doorway recieved an articulated design*

117 *Cave 11: later, the candrasilas were replaced by square steps*

118 *Cave 11: still later, no-step-at-all was the preferred rule at Ajanta, since the steps probably became stumbling blocks rather than convenince*

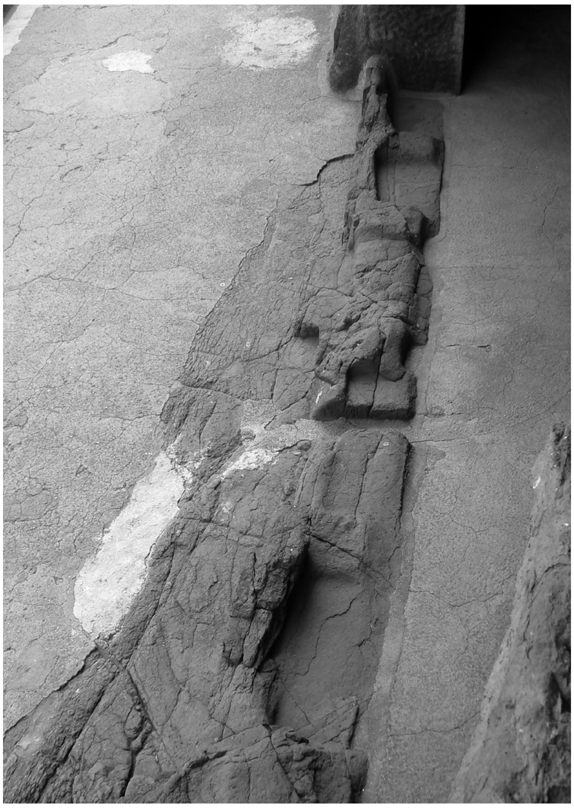


119 *Cave 11: the shrine Buddha image is among the earliest; the throne was reworked*

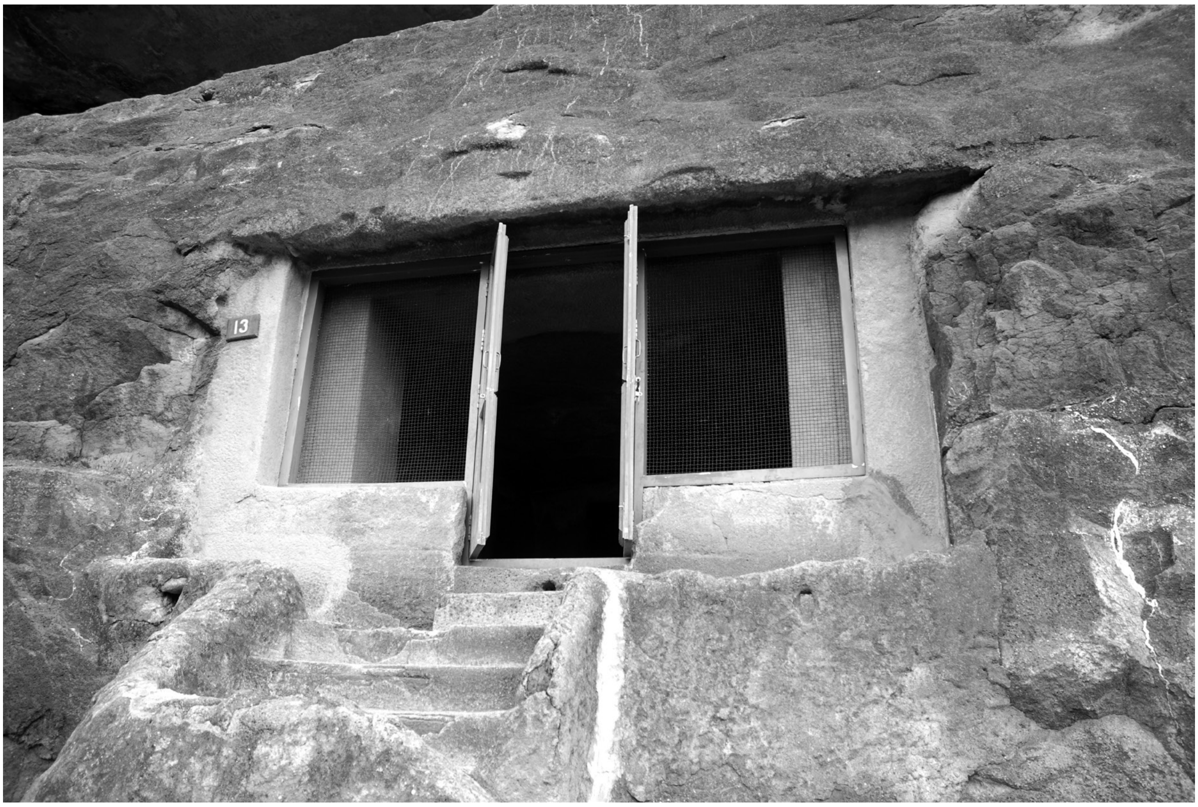
120 *Cave 11, the shrine Buddha: in this photo two layers of paintings are visible. After the first layer of painting, the image was put to worship. Many other evidence are preserved suggesting a prolonged worship activity in the cave.*

121 *Cave 12: this Satavahana-period upasraya probably had a pillared porch.*

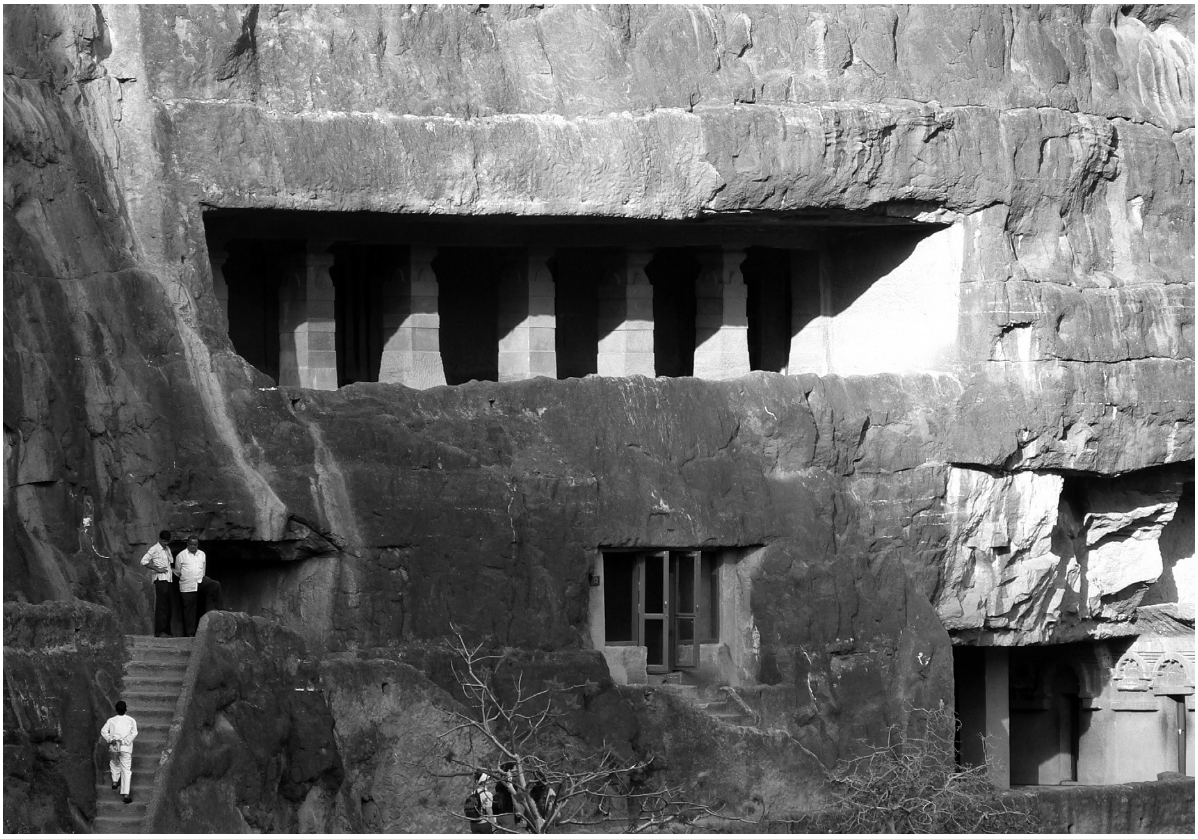
122 *Cave 12: the large hall has no pillars, as pillars were rare at the time.*



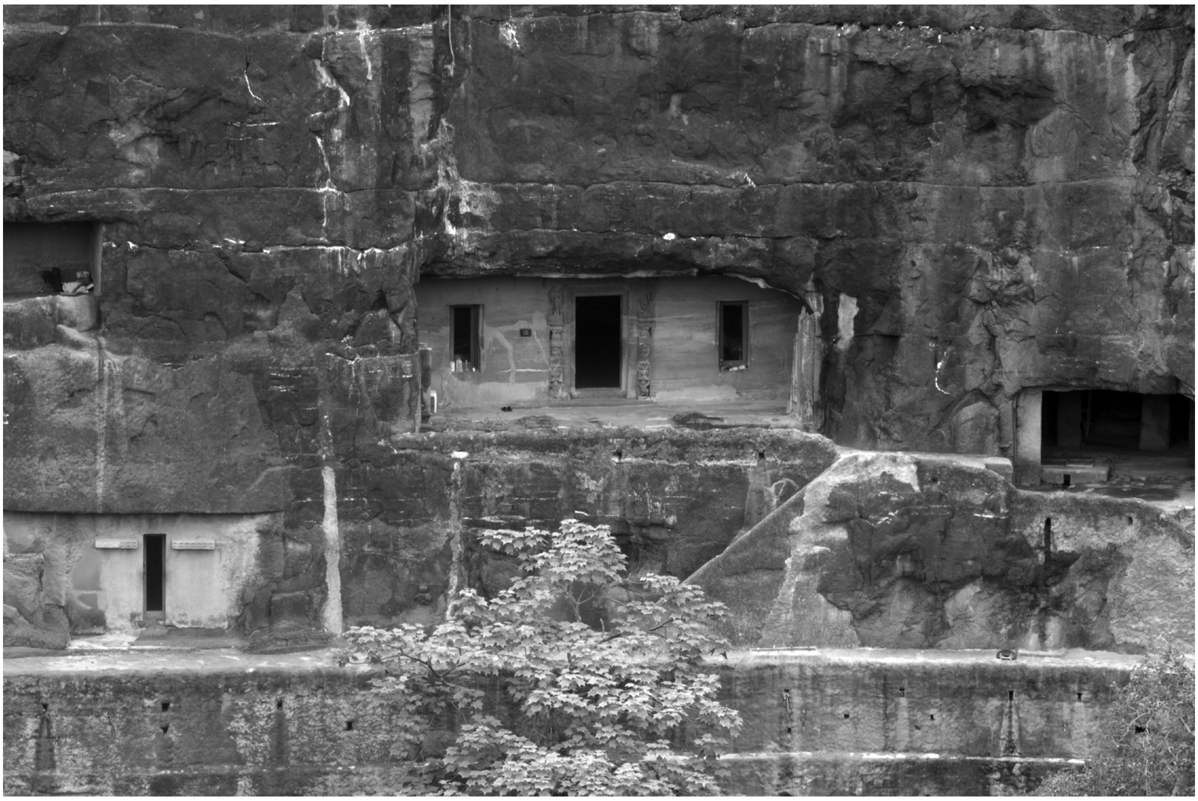
123 *Cave 12: Spink has not realised that the front wall is curved and benches like in Cave 11 were carved here fifth century.*



124 *Cave 13: a Satavahana-period upasraya*



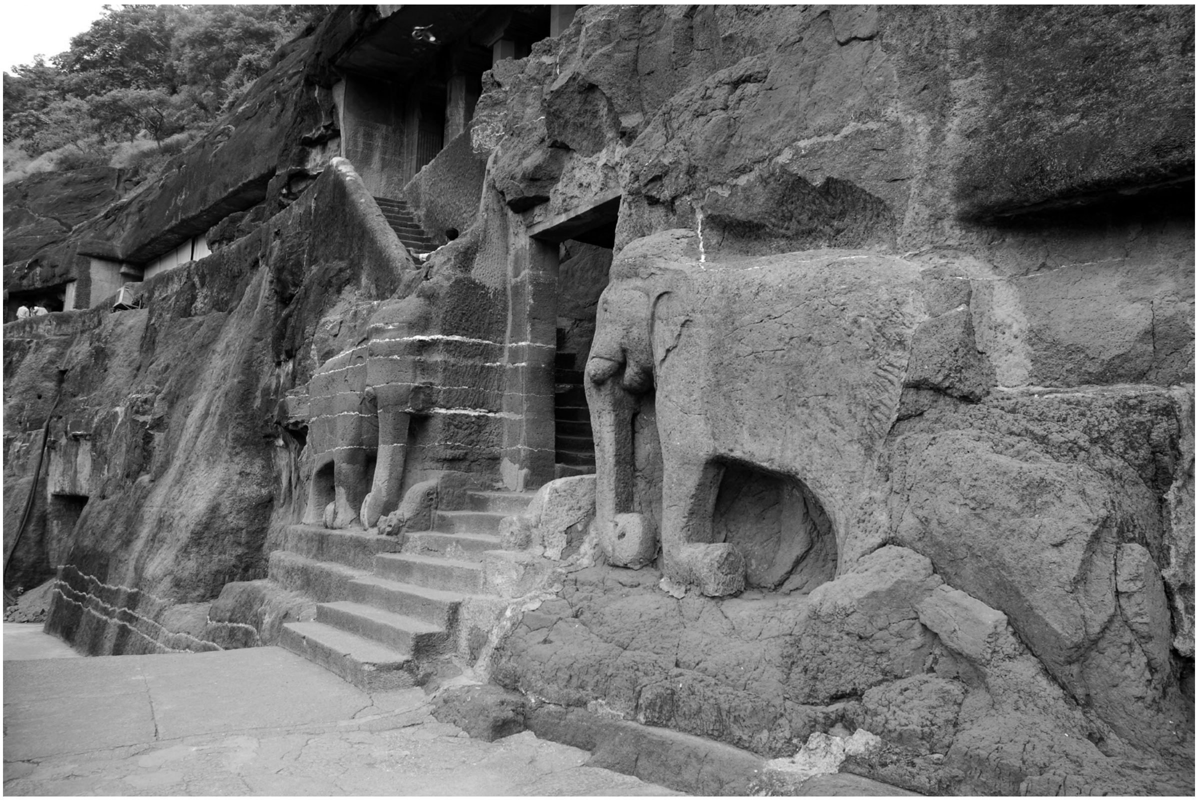
125 *Cave 14: this cave started very late in the fifth-century phase. Space on higher locations were still available. Thus, caves 3, 14, 22, and 29 have high elevation. This is the only cave at Ajanta that has square porch pillars with horizontal bands meant for carved decorations. The unique pillar design was specially evolved for this mandapa.*



126 *Cave 15 in the centre and Cave 15A on the left (re-discovered in 1952)*

127 *Cave 15: the upasraya with two-pillared porch and astylar hall retains for the large part the basic layout of the original plan. The main doorway had flat jambs.*

128 *From right to left: Caves 16, 17, and 18.*



129 *Cave 16, gaja-dvara (c. 466 CE): if this elaborate entrance gate appears unique at the site, it is only because of tremendous rock slide across the cliff in the course of time. The remains of thematic doorways are extant before Caves 6 (naga-yaksa-dvara), 19 (naga-dvara), and 26-complex (yaksa-dvara). Likewise, Caves 1 and 2 might have had thier own thematic entrance gates. Spink has not realised that most of these were planned in c. 466 CE.*

130 *Cave 16 entrance, the Nagendra shrine (c. 466 CE): named "Nagendra" in the dedicatory inscription of Varahadeva (the cave's donor), the shrine is not only an example of great architectural and aesthetic planning, Nagendra has a purpose here. He is the guardian not only of the edifice, but due to his central location on the scarp, he seems to guard the entire samgharama with his imposing presence. His authoritative posture displays his powers.*

131 *Cave 16, porch: Spink has not realised that initially the width and height were smaller*

132 *Cave 16, main door: the earlier plain door jambs were carved in 466 CE.*

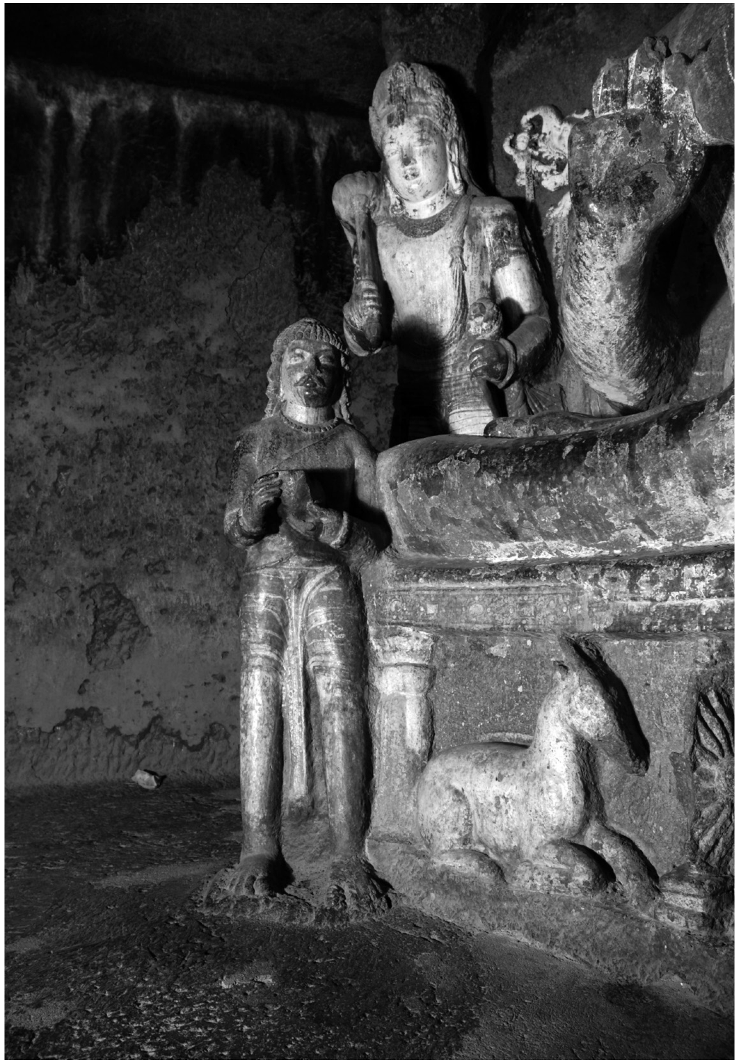
133 *From right to left: caves 17, 18, 19, and 20*

134 *Cave 17, tunnelled entrance: in spite of the heavy damage on the cliff, the original entrance with a flight of tunnelled staircase directly springing from the river bed is partially extant. Tunnelled entrances also existed before caves 6, 14, 16, and 26; they might have also existed before caves 1, 2, 19, 21, and 27.*

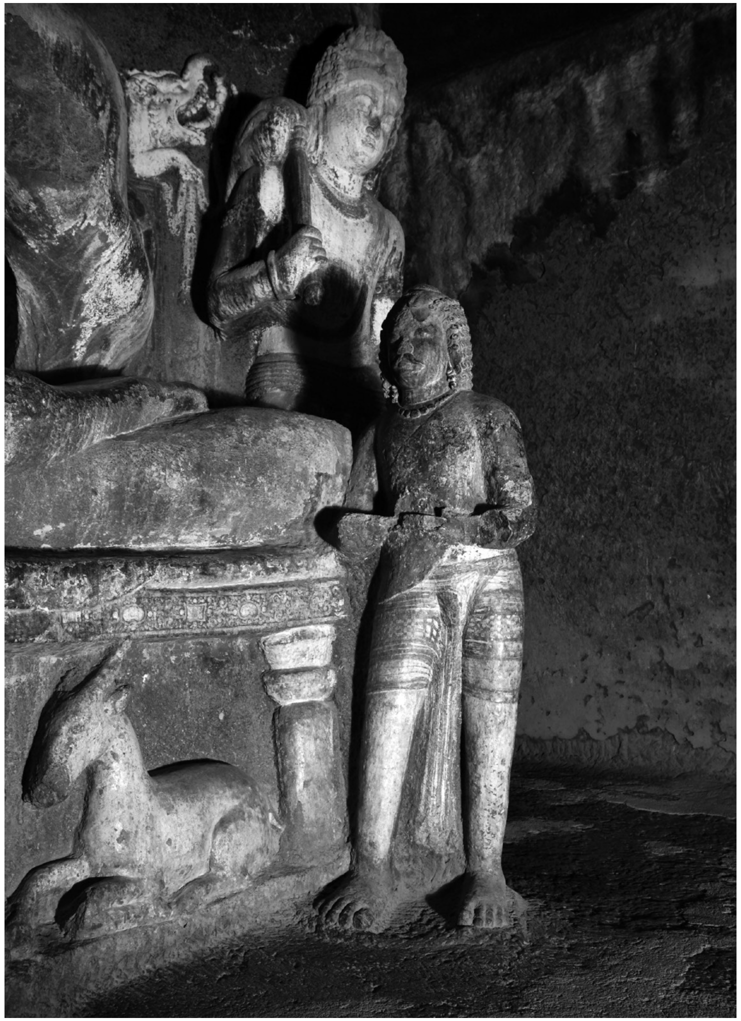
135 *Cave 17, porch: Spink has not realised that this porch, like those of caves 4, 5, 11, and 16 were widened in c. 466 CE, and the floor lowered.*

136 *Cave 17, the main door: Spink has not realised that the door was never so high in the original plan when the cave was merely an upasraya. After c 466 CE when the plan emerged to convert it to a temple the need of decorating the doorway arose for which the lions below the door jambs needed to be carved, for which the floor had to be lowered some 2.5 ft., a strategy also seen in caves 16, 4 and 11.*

137 *Cave 17, shrine: no scholar including Spink has been able to notice the identity of the two standing upasakas on either side of the Buddha. A survey of all such upasakas before votive Buddha images would lead to the conclusion that they are none other than the donors characterised by typical hairdo and outfit. In this case, they appear to be Ravisamba and Upendragupta II named in the donative inscription. The younger brother Ravisamba died premature (or was killed by the elder brother Upendragupta II, as inferred, perhaps correctly, by Bhau Daji). Realising 'the thunderbolt of impermanence', 'remorse,' and the 'transitoriness of life' the elder brother donated the 'stupaviharam' in the memory of the deseased brother.*

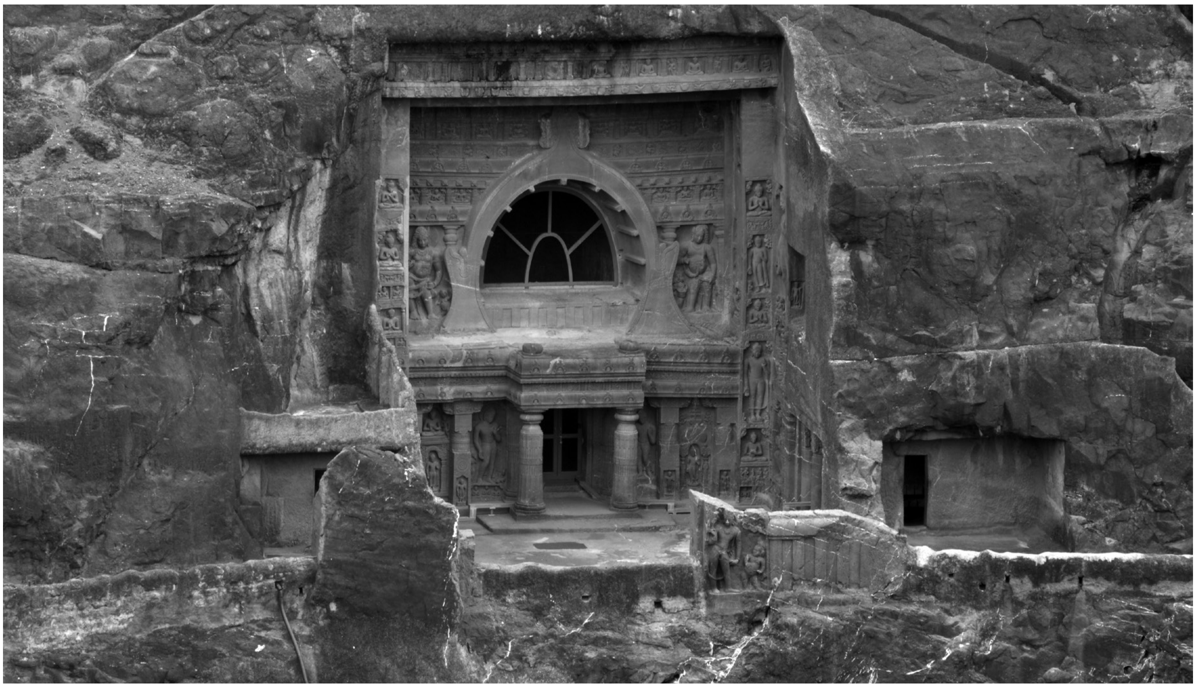


138 *Cave 17, shrine: the upasaka on the left could be Ravisamba, the deseased (or murdedred) younger brother of the donor Upendragupta II (king of Risika)*



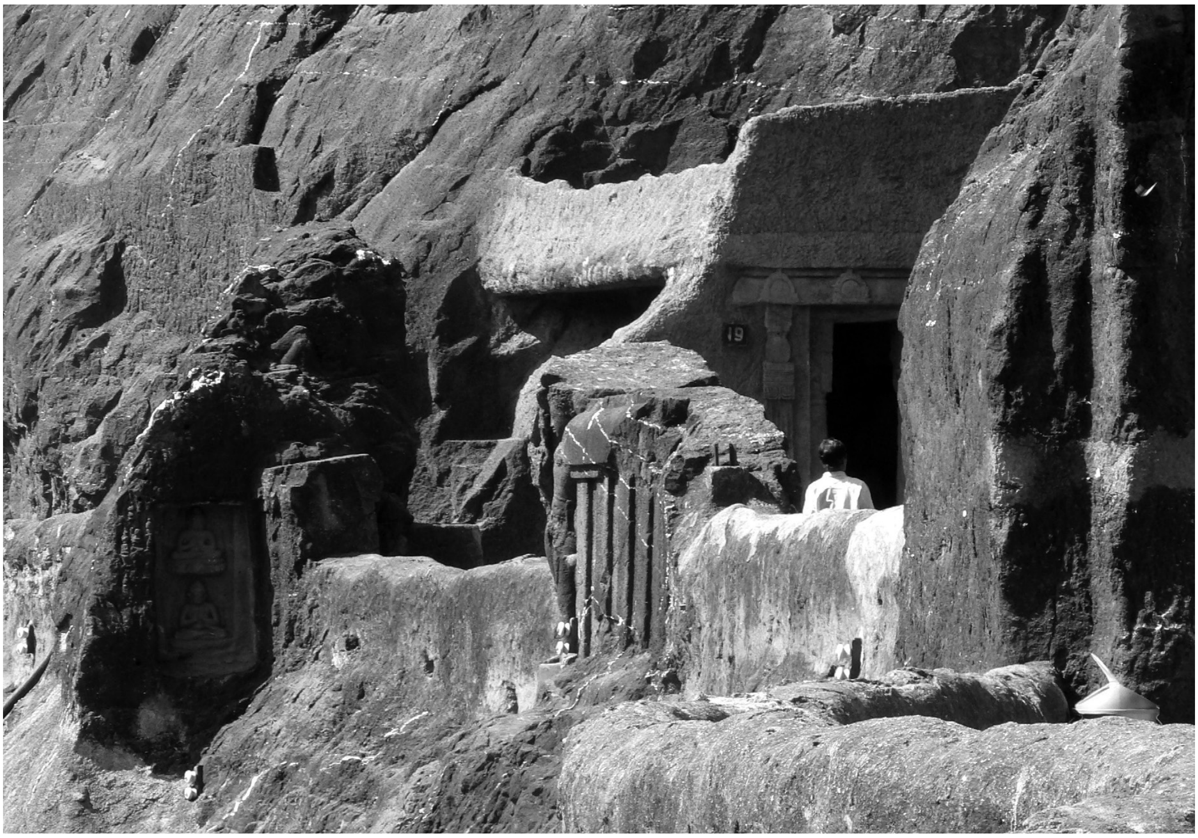
139 *Cave 17, shrine: the upasaka on the right could be Upendragupta II who was the donor of the 'stupaviharam' and king of Risika janapada. He is also the donor of Caves 18, 19, and 20.*

140 *Cave 18: Fergusson and Burgess gave it a number although it is simply a water cistern like many others on the site; in fact every major upasraya or mandapa at Ajanta has a cistern attached to it. Albeit the shelter of many other cisterns are now damaged so that this example looks deceptively unique.*

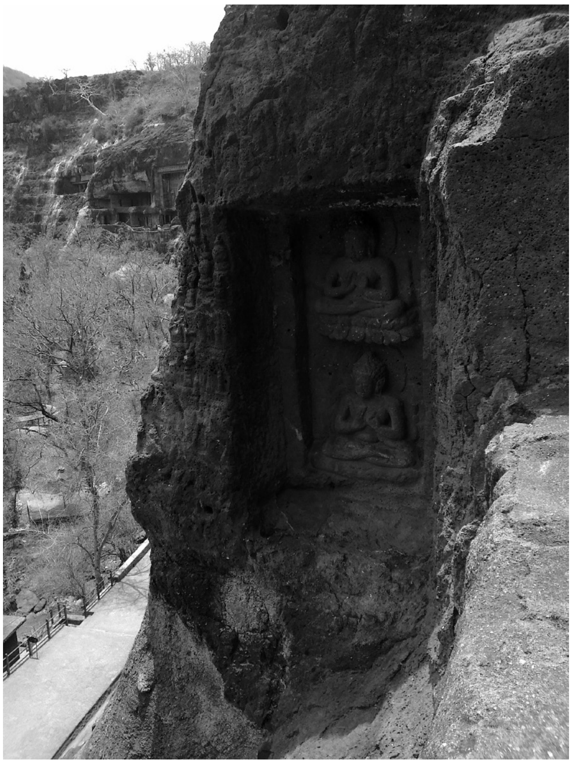


141 *Cave 19: sponsored by Upendragupta II, the local king of the Ajanta region (ancient name Risika janapada). In my view this is one of the three fifth-century edifices that were planned from the very start as Buddha temples. The three temples were also planned with astronomical orientation. This cave is oriented to Karttika Purnima marking the end of varsavasa, and felicitating the onset of the winter season. Spink argues that these temples are oriented to solstices, this one being oriented to winter solstice, which in my opinion is an untenable thesis, as the ancient Buddhists had nothing to do with solstices.*

142 *Cave 19, facade with double pillared portico: similar portico was extant in Cave 1 as seen in nineteenth-century photographs. Many sculptures seen here are 'intrusive' which were carved here and there in 'the period of disruption' after Harisena's death.*

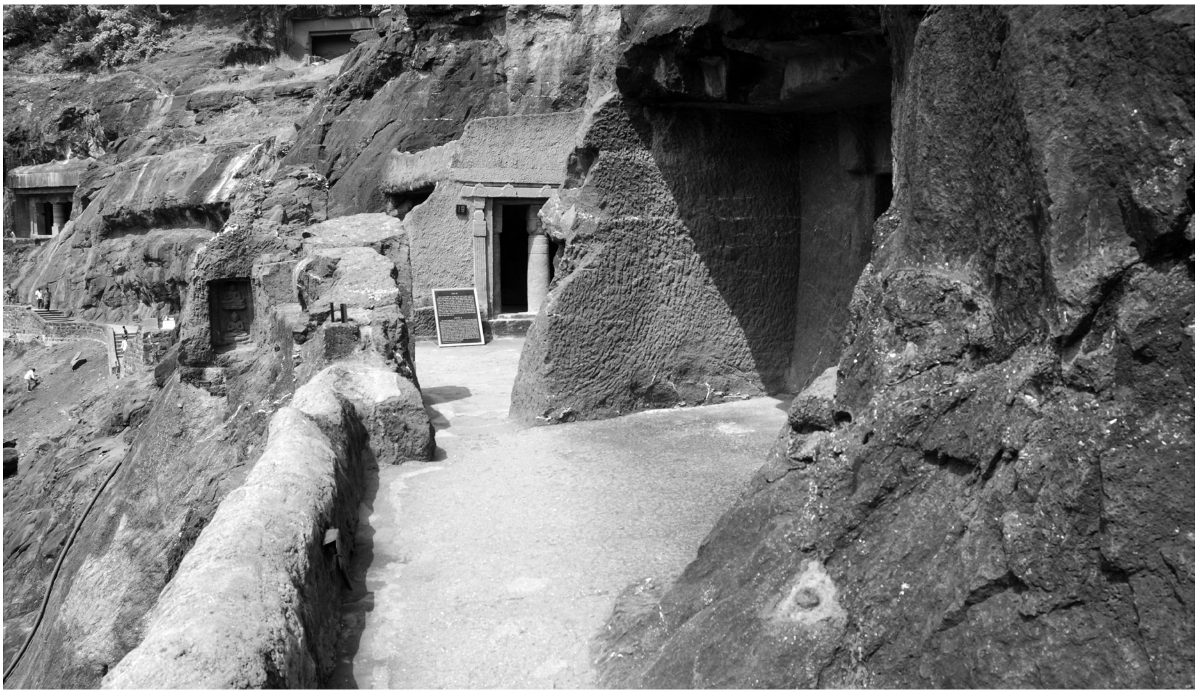


143 *Cave 19, exterior of prakara: vertical bands on the outer wall of the prakara (enclosure wall) is seen. In the centre of the prakara was the torana-dvara (main gate).*

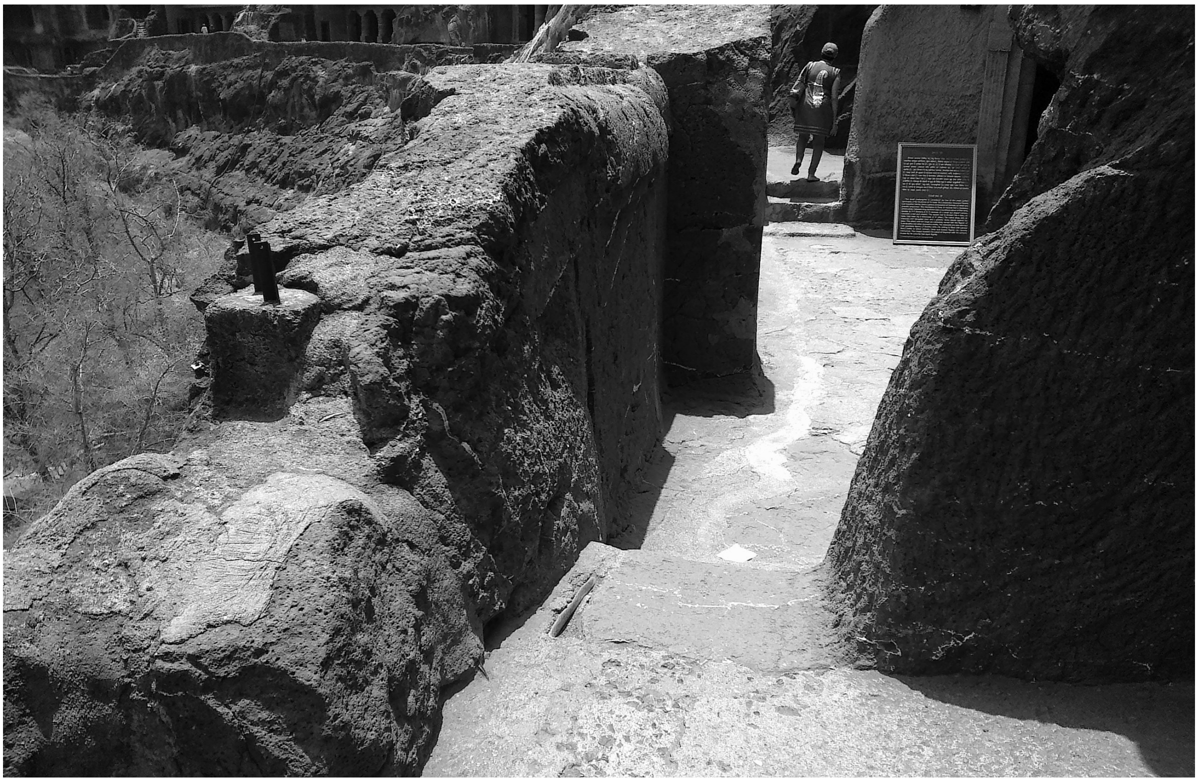


144 *Cave 19, intrusive padmasana Buddhas outside the toranara-dvara*

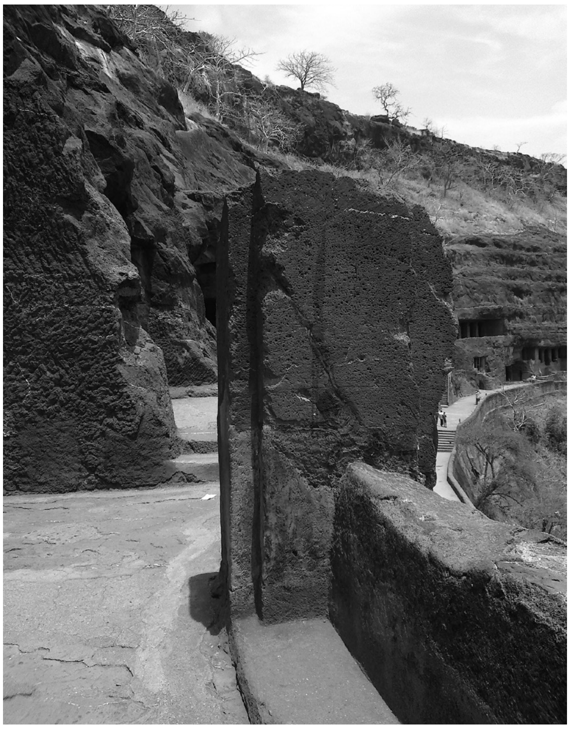
145 *Cave 19, while the naga-dvarapala guards the temple, Nagendra is attended by a yaksa and gandharva*



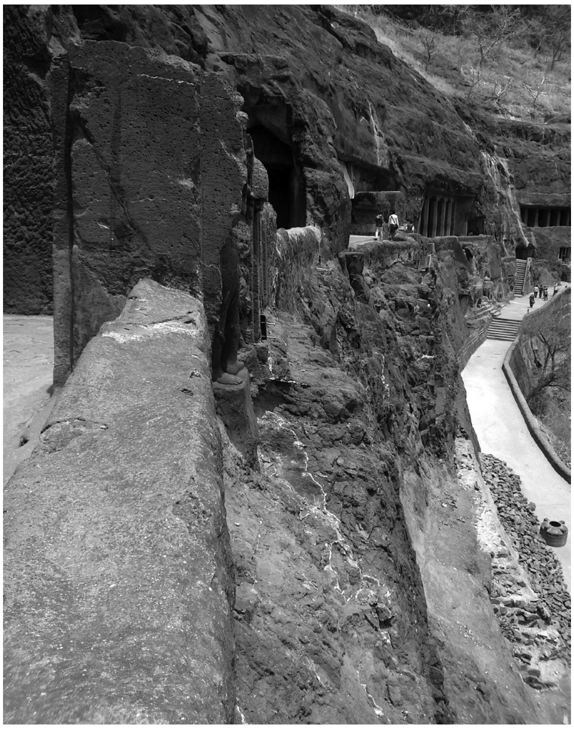
146 *Cave 19, front court: the right outer shrine's right inner chamber is seen here. Nothing of this was planned in the beginning. But when they were made during c. 466-469 CE, this cell was broken through "by the Asmakas" (Spink 2005-20013). The view is questionable.*



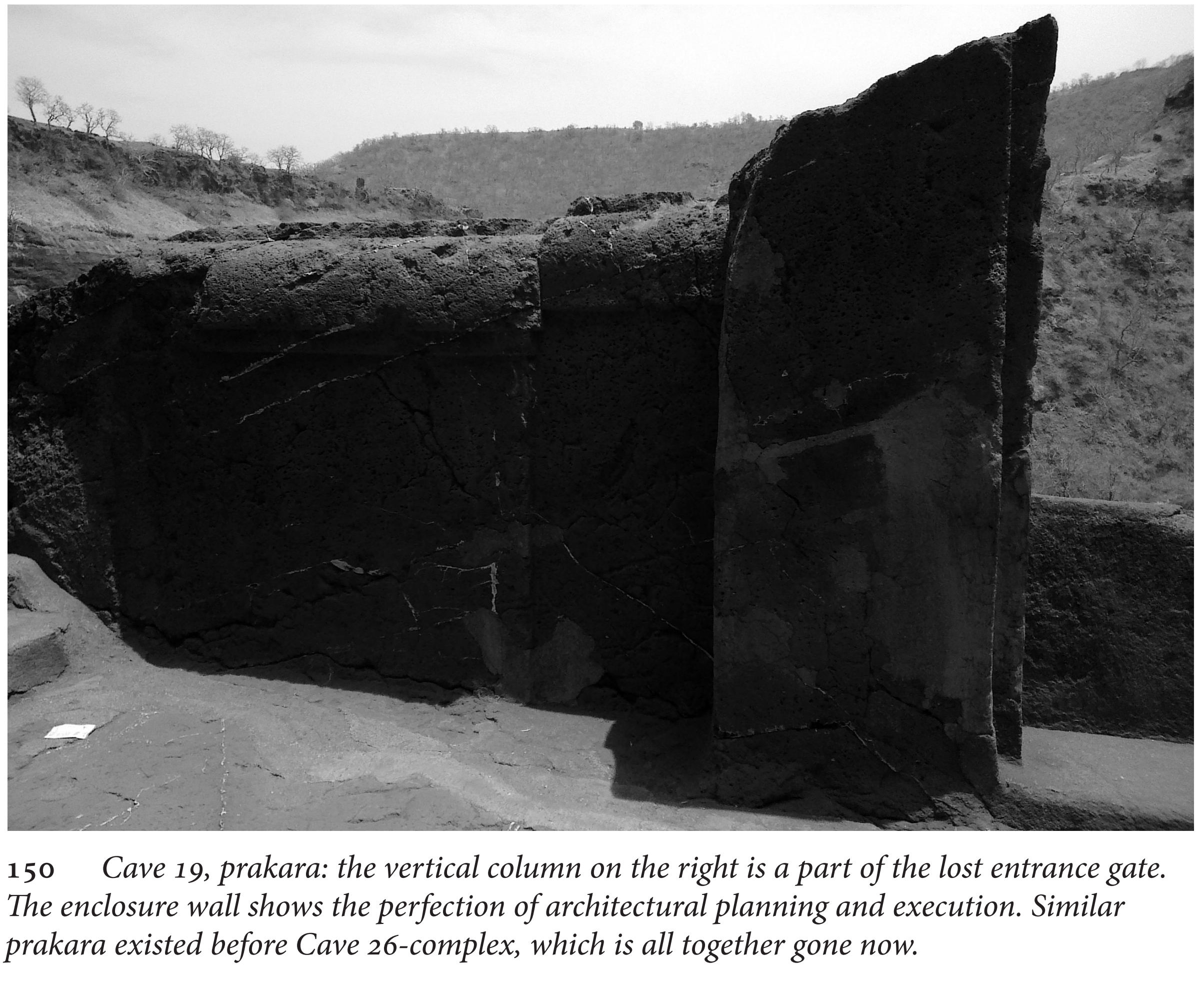
147 *Cave 19, front court: this passage, used even today by the tourists, was indeed created by destroying a part of the cell belonging to the right outer shrine. The question is: when the cave was accessed directly from the river bed through a flight of steps, why create a passage here? In other words, is creation of a passage tantamount to vandalism? If not, we wonder whether a rock slide had not happened that damaged the frontal access through the torana-dvara, thus necessitating an oblique passage of this kind, in which case, it wasn't vandalism, but the only option for approaching these caves after the rockslide.*



148 *Cave 19, extant right pillar of the mostly perished torana-dvara*

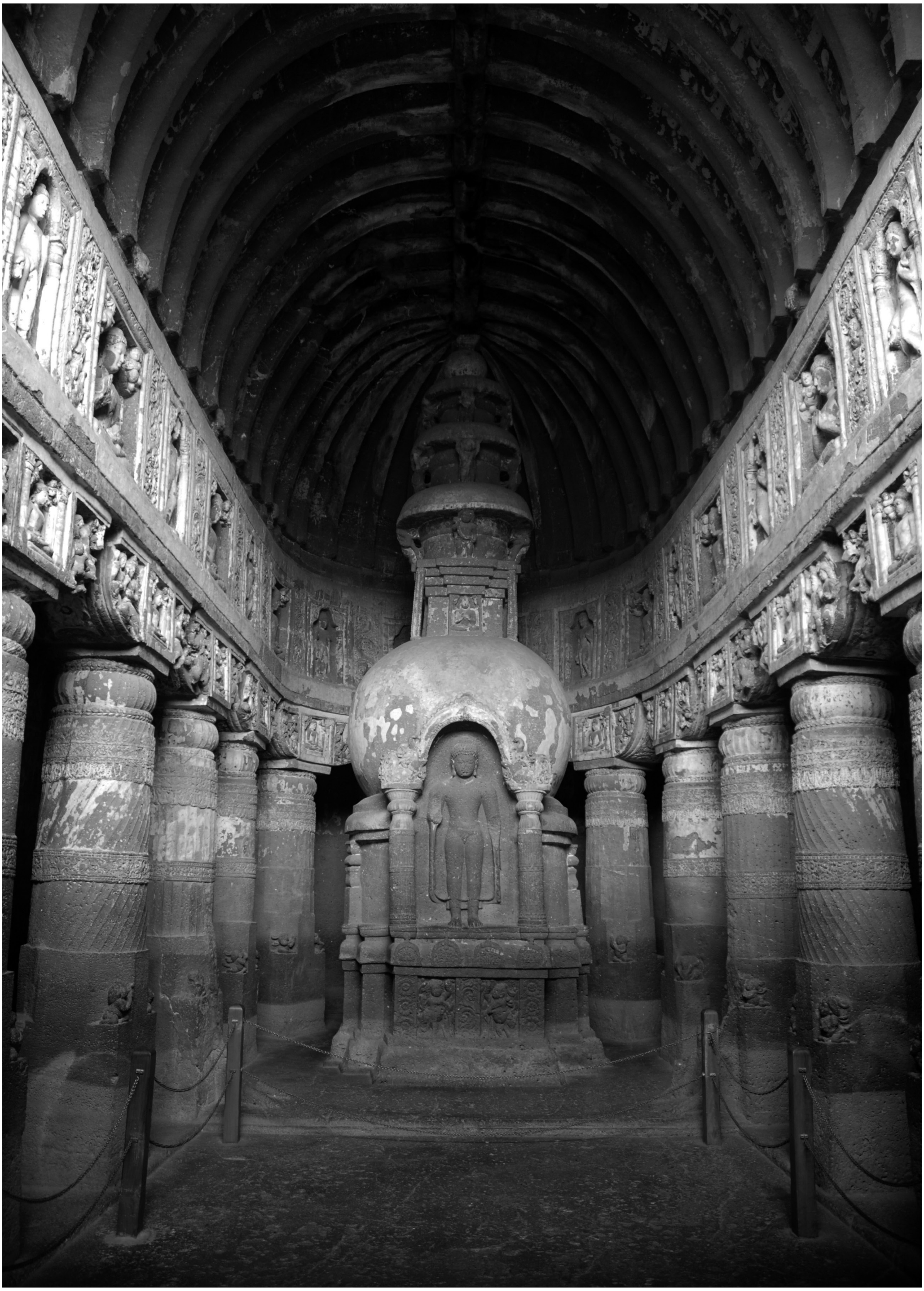


149 *Cave 19, the exterior of the torana-dvara showing the extent of damage to the cliff. No trace of the flight of steps from the river bed is extant.*



150 *Cave 19, prakara: the vertical column on the right is a part of the lost entrance gate. The enclosure wall shows the perfection of architectural planning and execution. Similar prakara existed before Cave 26-complex, which is all together gone now.*

151 *Cave 19, the curvature of the facade wall: the pilasters on the facade wall seen on the right clearly shows the bow-like curvature. Spink suggests this was to wrench the edifice, somewhat unsucessfully to align to the rising sun of winter solstice on 21-22 December. While no one could refute what is most clearly visible, the alignment, in my view, was not to winter solstice, but to the sunrise of four major uposathas of winter (a) Karttika Purnima that marks the end of varsavasa, start of winter, and Kathin Civar Dan festival (b) Margasirsa Purnima (c) Pusya Purnima and (d) Magha Purnima. These are major dates in the life of a sangharama when the recluse monks come directly in contact with the upasakas who visit the monastery with gifts and donations, and recieve sermons in return.*

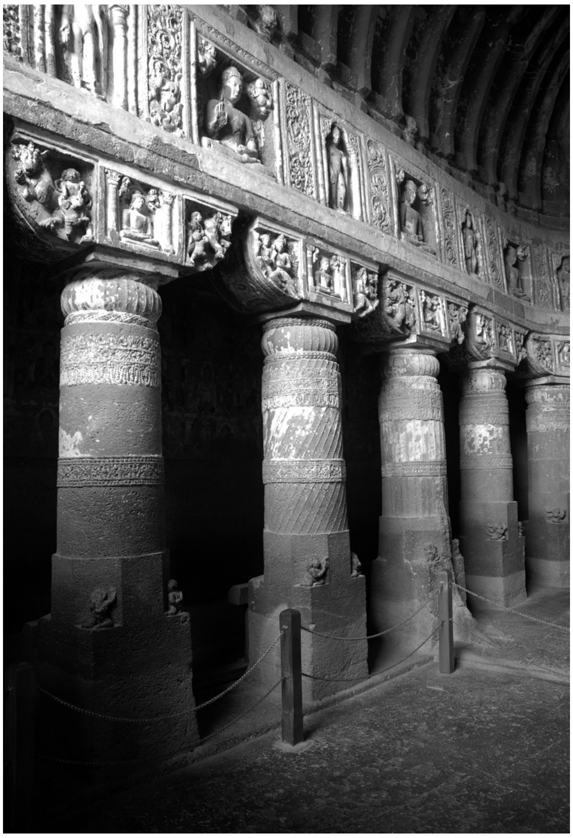


152 *Cave 19, interior: the combination of the stupa and image flies on the face of the modern historians who constructed a dubious antethesis between the stupa and the image. The historians labelled stupa worshippers as the 'Hinayanists' and the image worshippers as the 'Mahayanists.' These generalised and misleading constructs are diametrically opposite to what the stupa-image combine most clearly suggests: that there was no antethesis at all; the stupa and image were one and the same for the makers of Ajanta in the fifth century. This is revealed even epigraphically, as the image shrine of Cave 16 is called 'caityamandiram' in that cave's donative inscription, and Cave 17's image shrine is called 'stupaviharam' in that cave's donative inscription.*

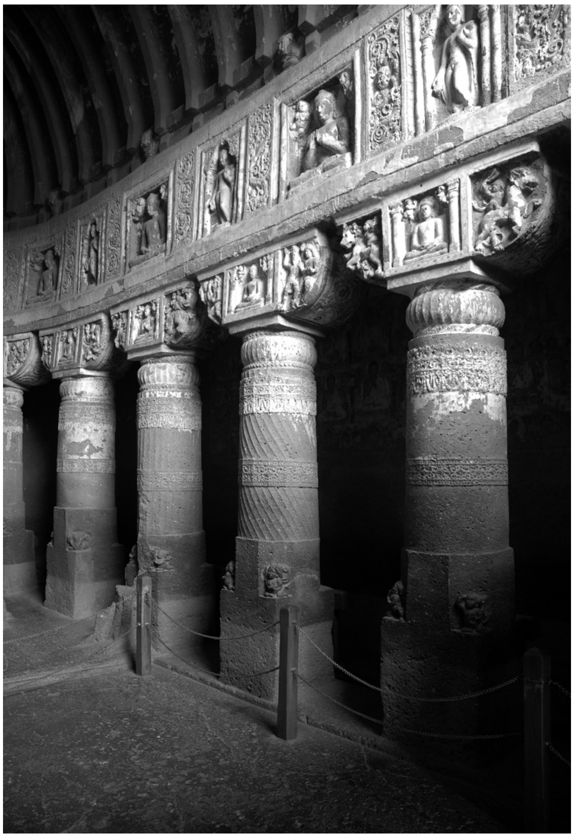
153 *Cave 19, the geat caitya arch seen from the interior: 'great people commit silly mistakes' is a proverb proved right by Spink who is engaged untiringly since three decades to prove what can never be proven, that there is a 'solstitial alignment' to the cave on 21-22 December (Spink 1985). His data is producing the difference of up to 7 degree, thus giving him sleepless nights (personal communication; his revised thesis in the forthcoming vol. 8). Anyone looking at the width of the base of the arch (11 ft.) would not bother so much for the difference of 7 degree, as even at that difference the wide beam of light would fall on the stupa, although not precisely in the centre. The real fact is that the entire solstice theory is dubious and grossly inductive, as the ancient Buddhists never had anything to do with solstices of the Gregorian or Julian calendar of Christian Era. My research, on the contrary, shows that the fifth-century people of Ajanta followed the amanta calendar of Saka Era (traditional calendar still to be found in a typical home of Maharashtra), and it was only purnima that was important to them. Actually, this cave is aligned to not one but four purnimas that are major uposathas.*

154 *Cave 19, ceiling of the vault: Spink says that the vault along with the axis of the nave was wrenched to try to correct the alignment to winter solstice on 22-22 December.*

155 *Cave 19, ceiling of the vault*

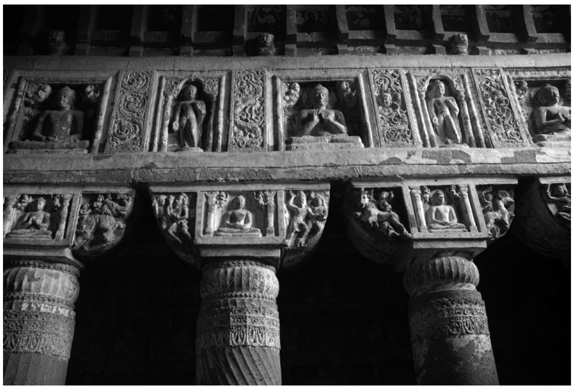


156 *Cave 19, interior: left colonnade and triforium*



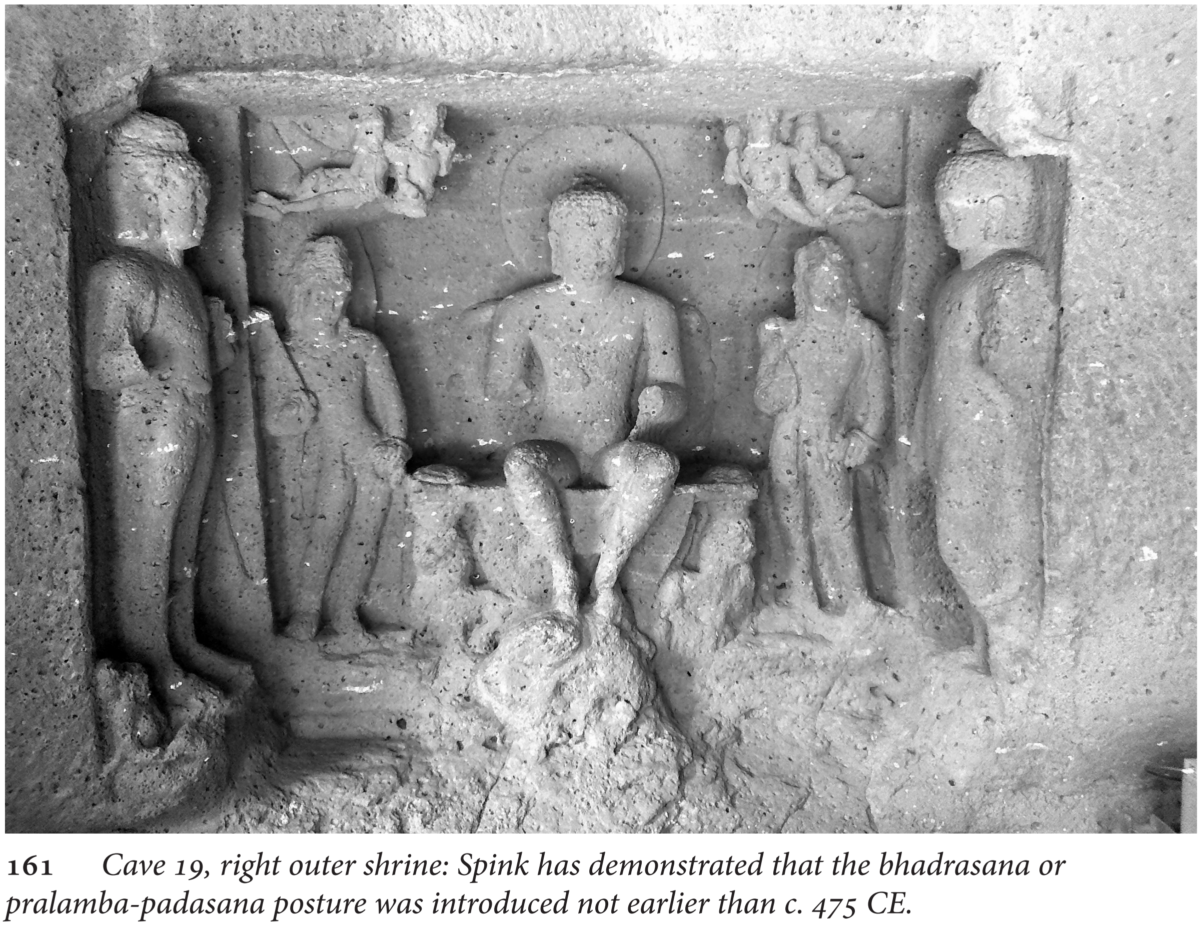
157 *Cave 19, interior: right colonnade and triforium*

158 *Cave 19, interior: the first pillar on the left*



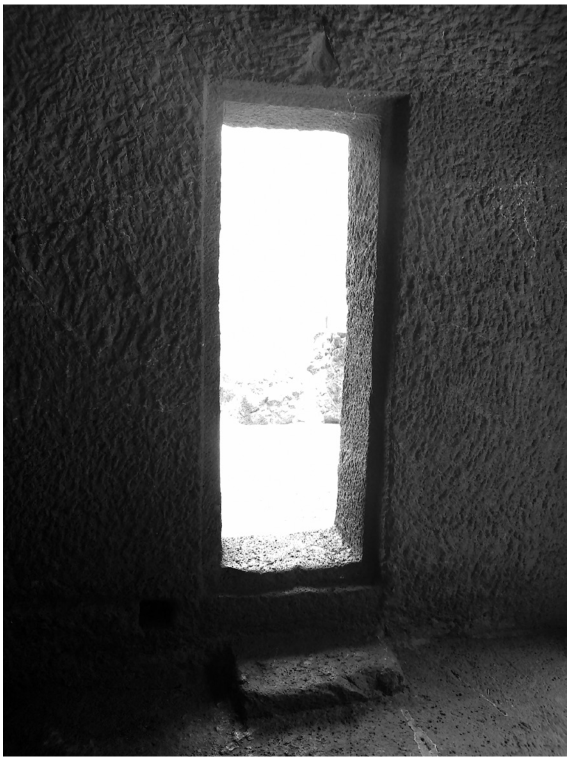
159 *Cave 19, interior: the pillar capitals and the carved triforium*

160 *Cave 19, the right outer shrine: initially the right outer wall was plain; in c. 464-465 CE, single cells were carved on the outer walls; during c. 467-469 CE, the front walls of the cells were removed except the rock enough to carve out the double pillars; still later, cells were carved on the side walls of the pillared chambers; lastly this whole thing was made into a Buddha shrine by carving out Buddha panels on the rear walls of the chambers. This pattern is seen throughout the site with reasonable variations.*

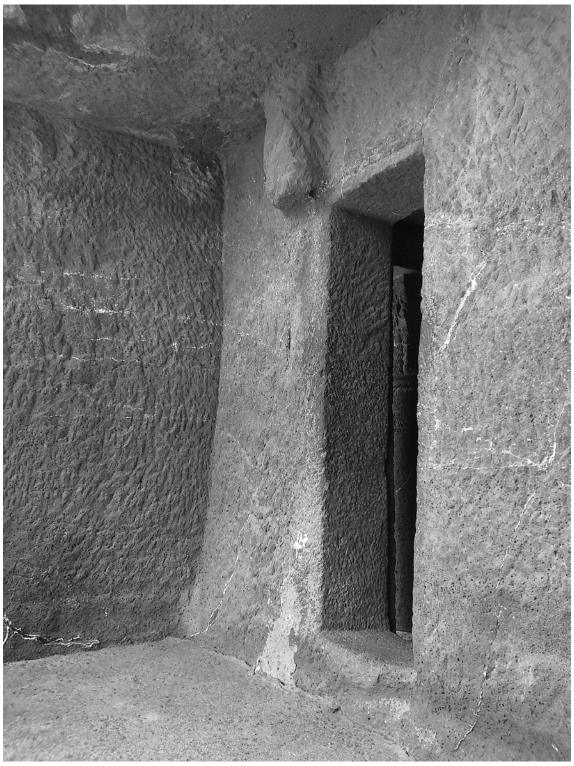


161 *Cave 19, right outer shrine: Spink has demonstrated that the bhadrasana or pralamba-padasana posture was introduced not earlier than c. 475 CE.*

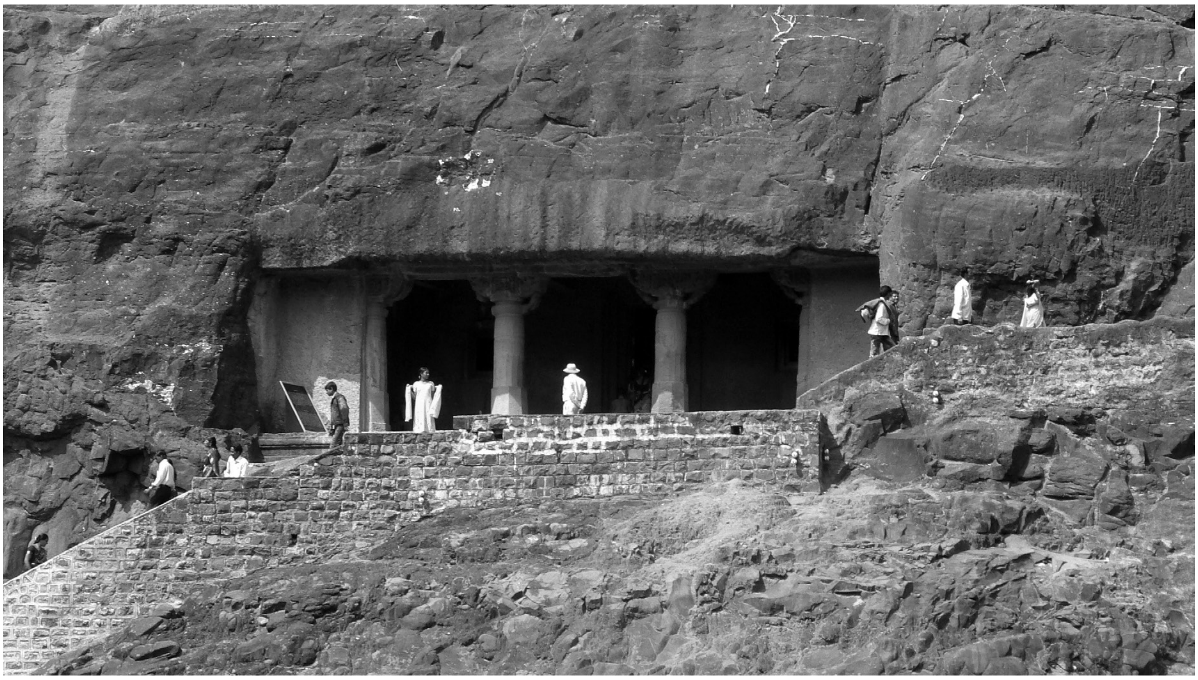
162 *Cave 19, right outer shrine ceiling: the shrine was elaborately and lavishly painted*



163 *Cave 19, right outer shrine: the cell on the right wall has a square step, a feature of c. 469 CE.*



164 *Cave 19, right outer shrine, right cell: Spink's B-mode door fitting suggests here the date of c. 469 CE.*



165 *Cave 20*

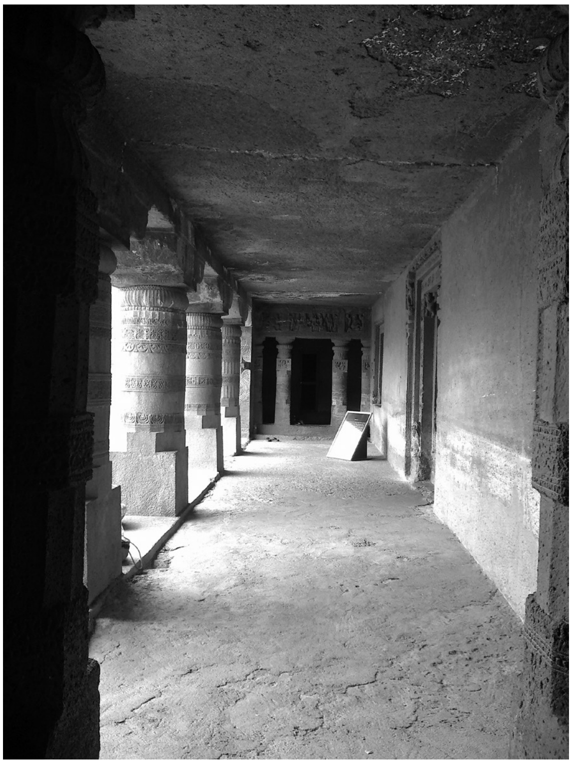
166 *Cave 20: initially when the edifice was simply an upasraya, there was no need for any such decorativ staircase. In c. 466 CE, when the caves were being converted to temples, the need of such embellishments came. To reveal the steps, the floor had to be cut down as was done in Cave 26-complex.*

167 *Cave 20, porch ceiling: agrolithic patterns are seen here and in Cave 16, the sign of the earliest and the most rapid early developments. It was both time-consuming and expensive. So, a decision was soon made to opt for the painted versions of the pattern, seen throughout the site.*

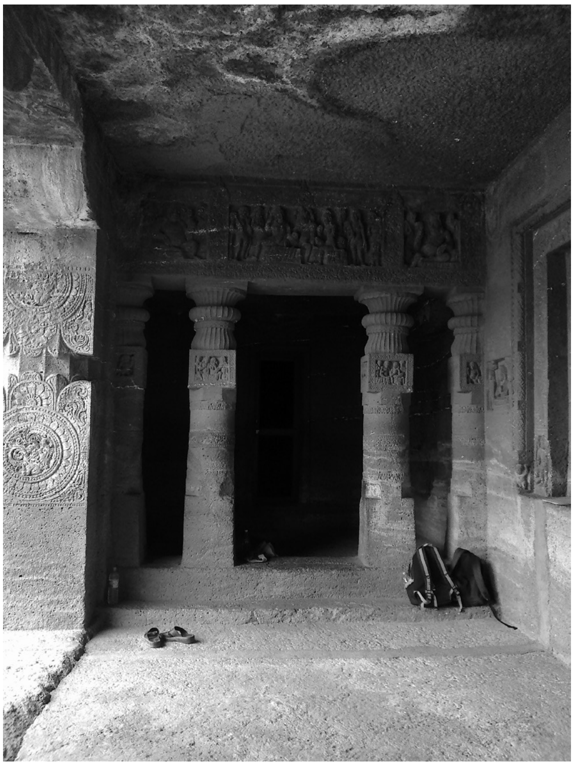
168 *Cave 20, shrine door fittings: among the most remarkable features of Spink's research is what he calls 'the defining features'. This oblong cubical door fitting was to hold the massive wooden double doors that opened toward the inteior. Cave Lower 6 is the only other place at Ajanta where this type is seen. The idea was discarded no sooner than it was devised in c. 466-467 CE in favour of the smaller and smarter B type projections with pivot holes.*

169 *From right to left: Caves 21, 22, and 23. Through his characteristic analysis of architectural inter-relationships and the chronological development, Spink has convincingly established that Buddhabhadra, the known donor of Cave 26-complex must be identified as the donor of Caves 21, 23, 24, 25, and 27.*

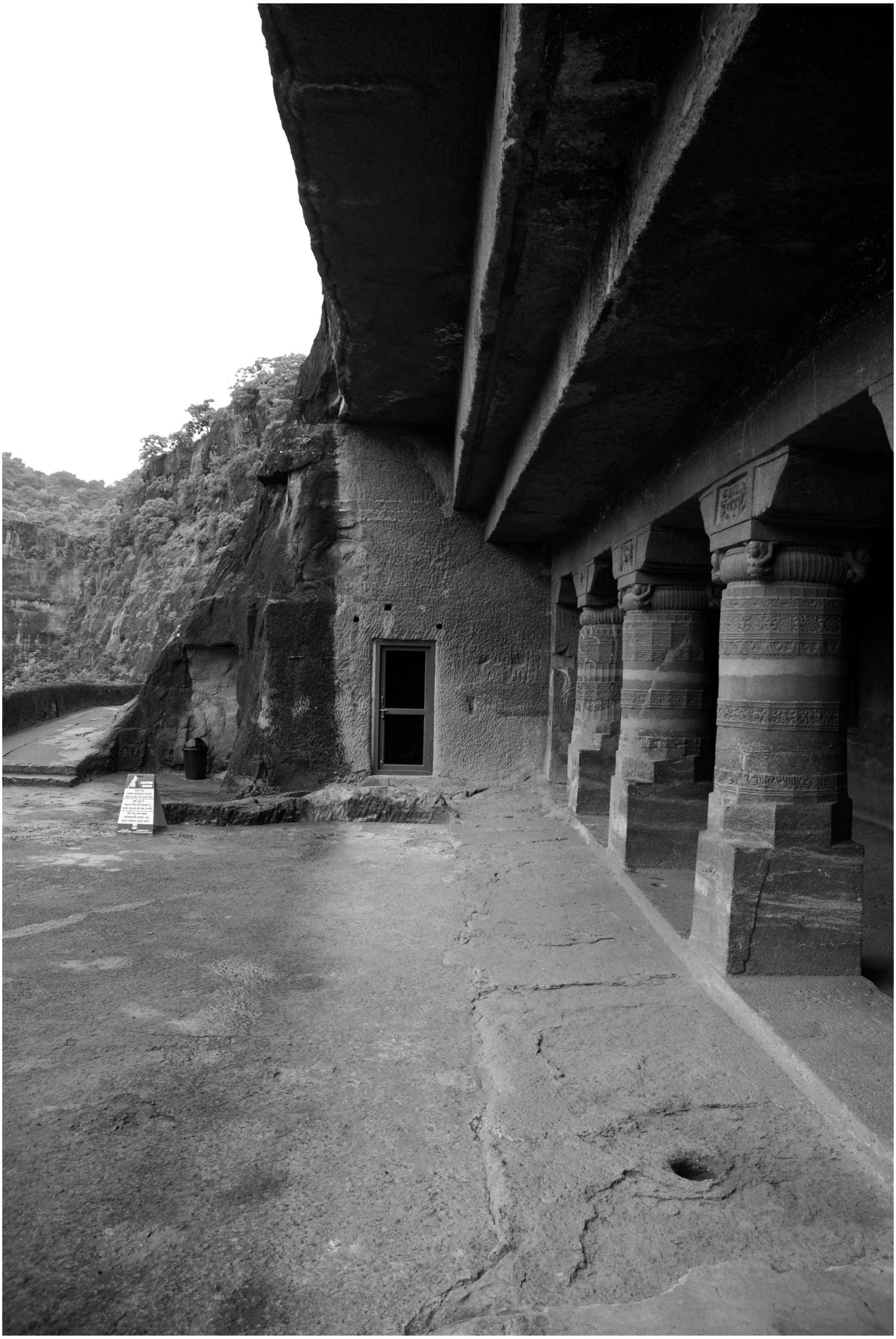
170 *Cave 21, facade: most of the pillars are cement reconstructions*



171 *Cave 21, porch*



172 *Cave 21, the left porch-end pillared vestibule with inner cells*

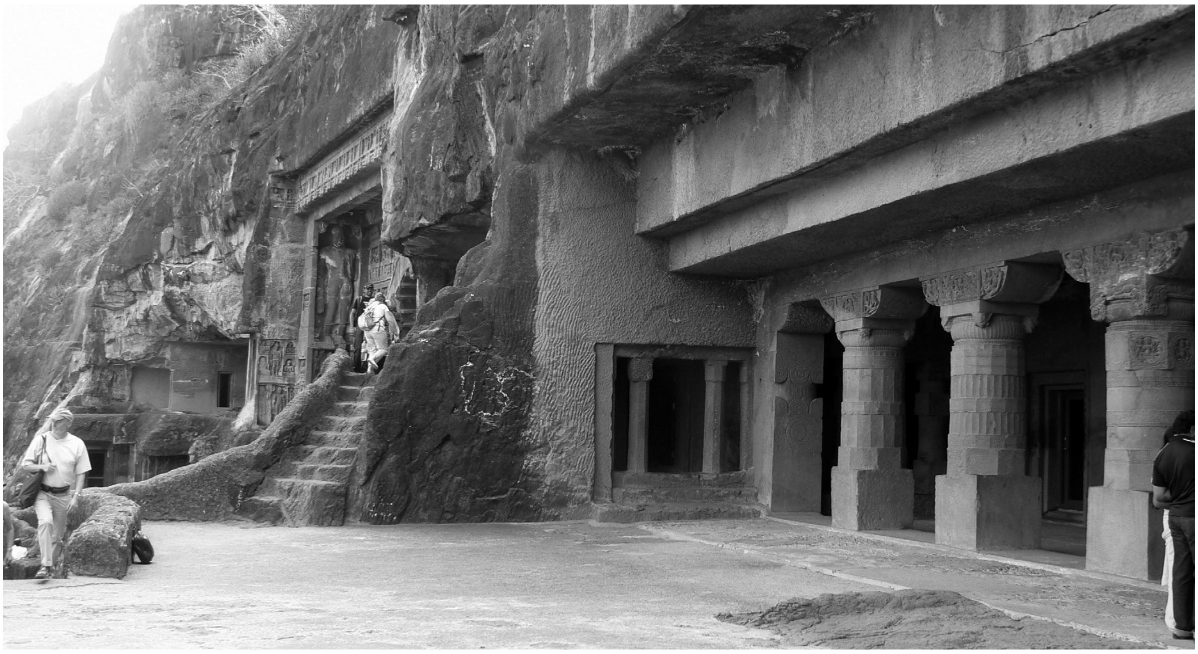


173 *Cave 23, facade: one of the signs of rapid evolution in the architectural planning and of the fuller pronouncement of the forms and skillful execution is seen in the wide, deep, and expansive eaves here, also seen in the other lately started edifices of the fith-century phase.*

174 *Cave 23: the hall looks deceptively complete with fine designs on the pillars, and there are paintings too on the ceiling.*

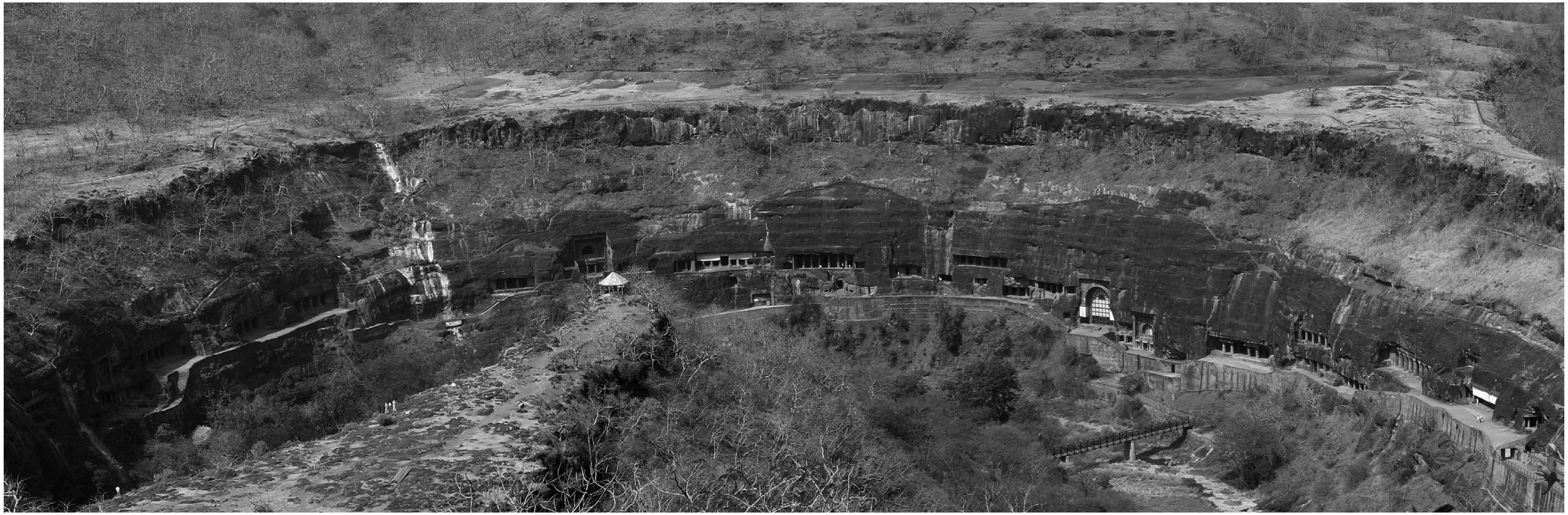
175 *Cave 23, the shrine with antechamber: the grossly incomplete part of the cave begs for an explanation; if the rest part of the cave appear to have been largely completed with paintings, why was the shrine with antechamber never completed; why the shrine Buddha was never even initiated? Why is such abrupt ending seen in every fifth-century cave? The attempt to find the answers would lead to similar conclusions as provided by Spink.*

176 *Cave 24, facade: notice the deep, wide, and expansive eaves that could only have been possible by c. 464 CE when the edifice was begun; in the 15 upasrayas that started together in c. 461-462 CE such deep eaves were unthinkable.*

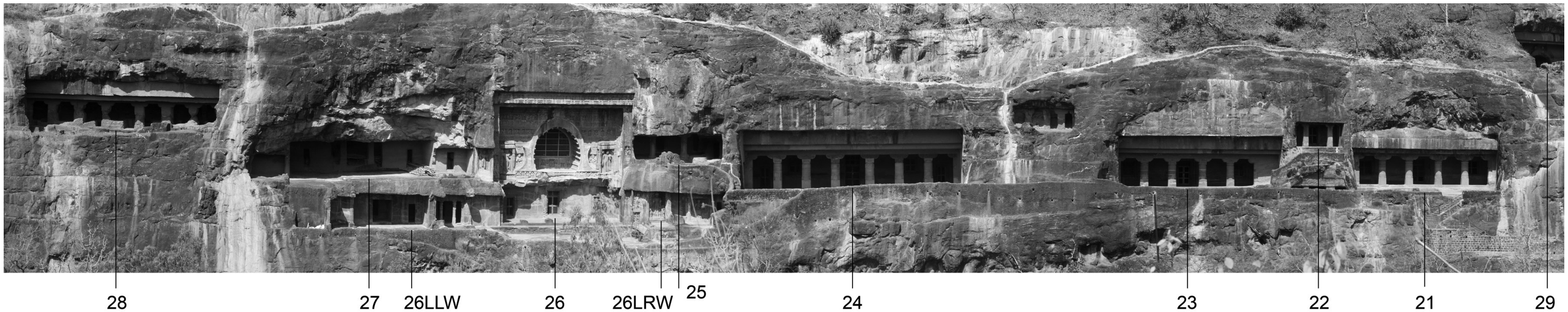


177 *From right to left: Cave 24, 25, and 26-complex. The left outer pillared-shrine of Cave 24 goes underneath Cave 25. Questions: assuming Cave 25 started earlier and was fully dug up to the floor level, how could this shrine have been possible at all? On the contrary, assuming that Cave 25 started later, how could Cave 25 ever hope to reach the floor level with this shrine underneath? Analysis would reveal a complex chain of events here, thanks to the research of Spink that unravels the step-by-step development of each cave in most graphic terms. I differ with him only marginally on nitty-gritties; my research is merely corrective or revisionist, with additional data, evidence, and analysis that incidentally adds twists to the stories Spink narrates.*

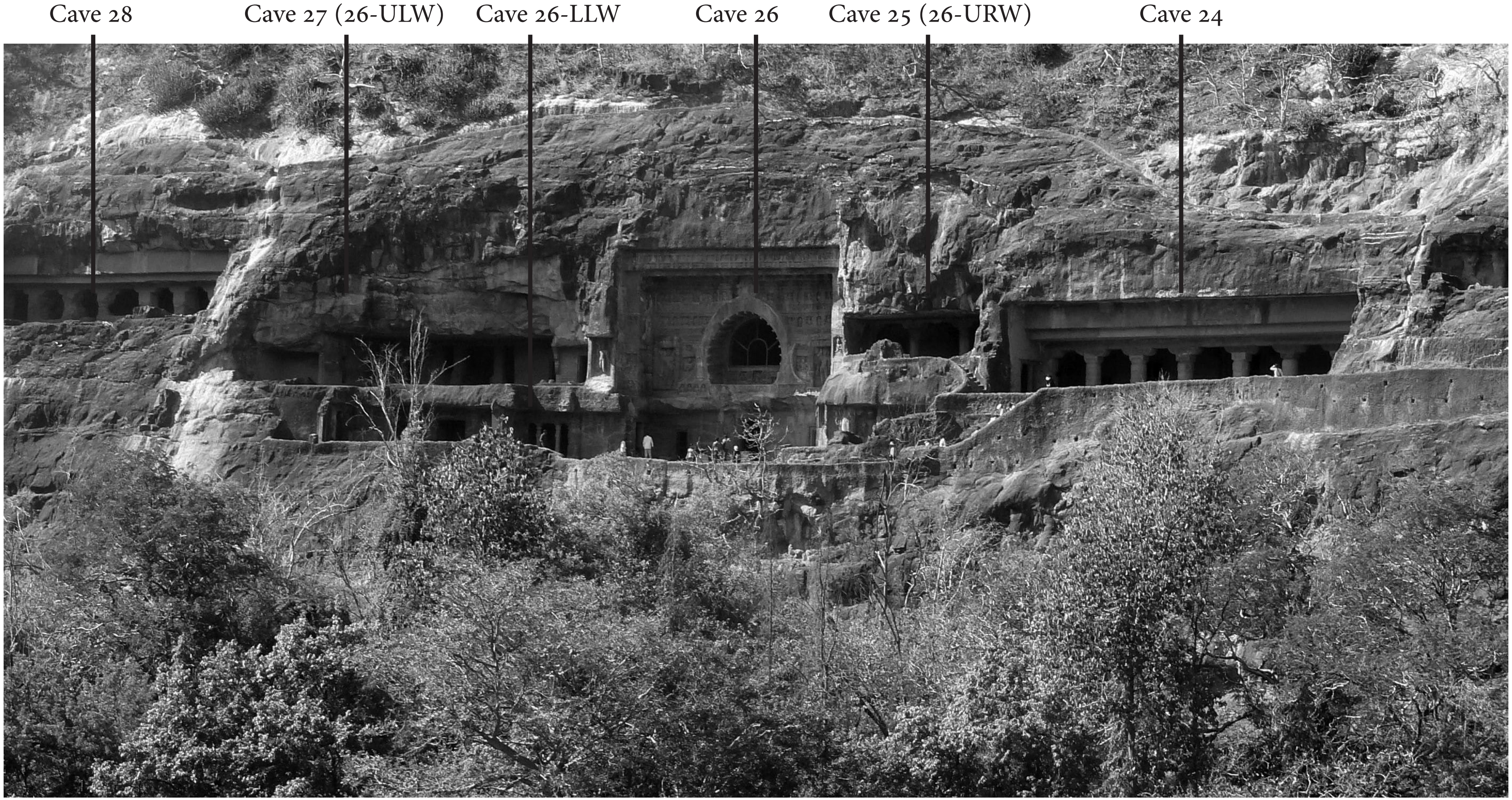
178 *Cave 24, interior: figures 175-176 do not offer any clue to what is inside the cave. Question: if the interior was so grossly incomplete what was the hurry about to complete the facade and porch to the last detail? What was the procedure and pattern of work here? Analysis reveals that all work was happening simultaneously here; the masons and artists were working together; the work was quite rapid and vigorous, just as Spink says; and that the scholars before Spink gave baseless dating ascribing centuries for the caves' development.*



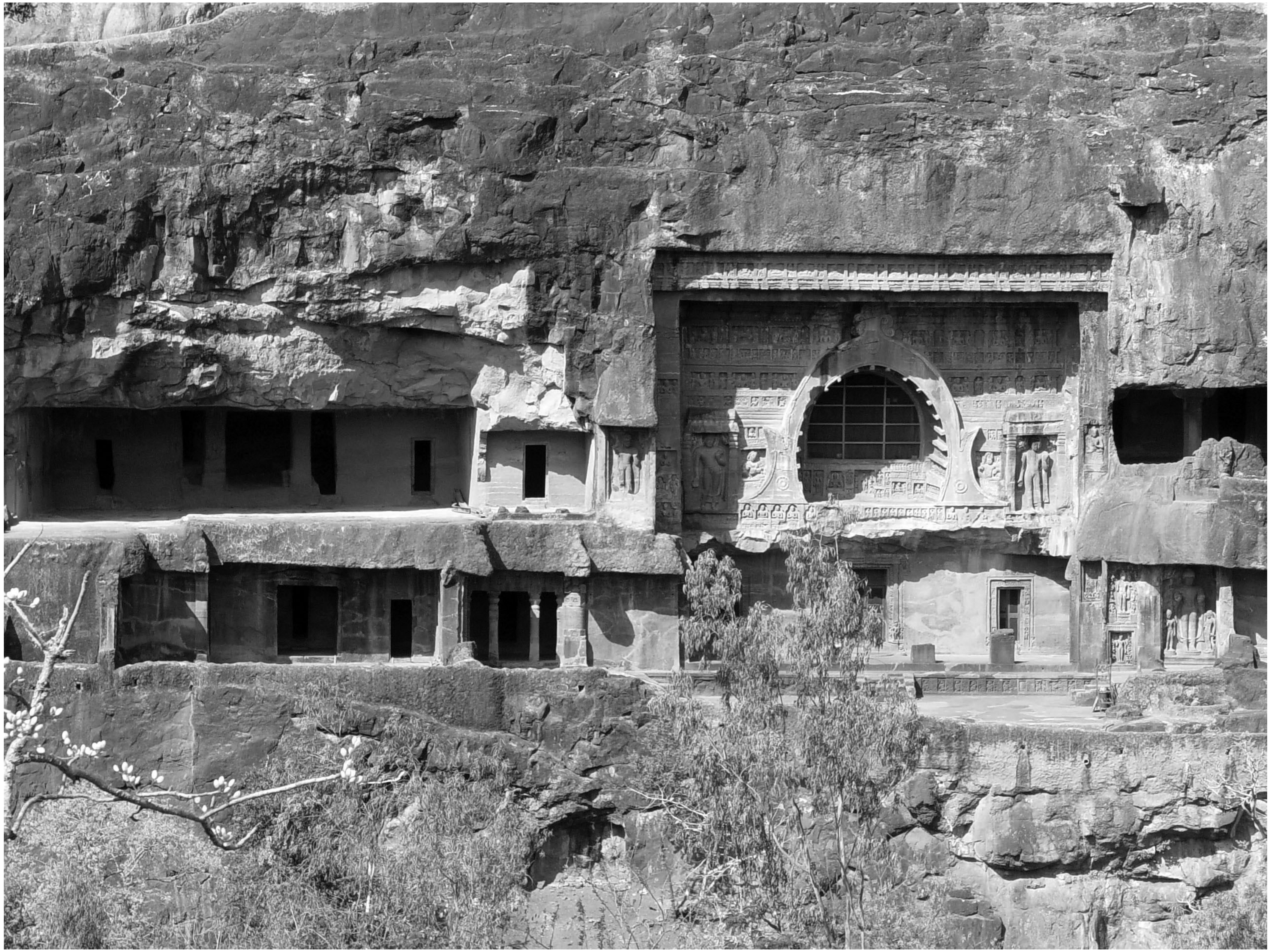
179 *The range of Indhyadri ghats where the samgharama of Ajanta have been dug on to the rock cliffs. (Two photos digitally merged; the actual curvature is greater than seen here.)*



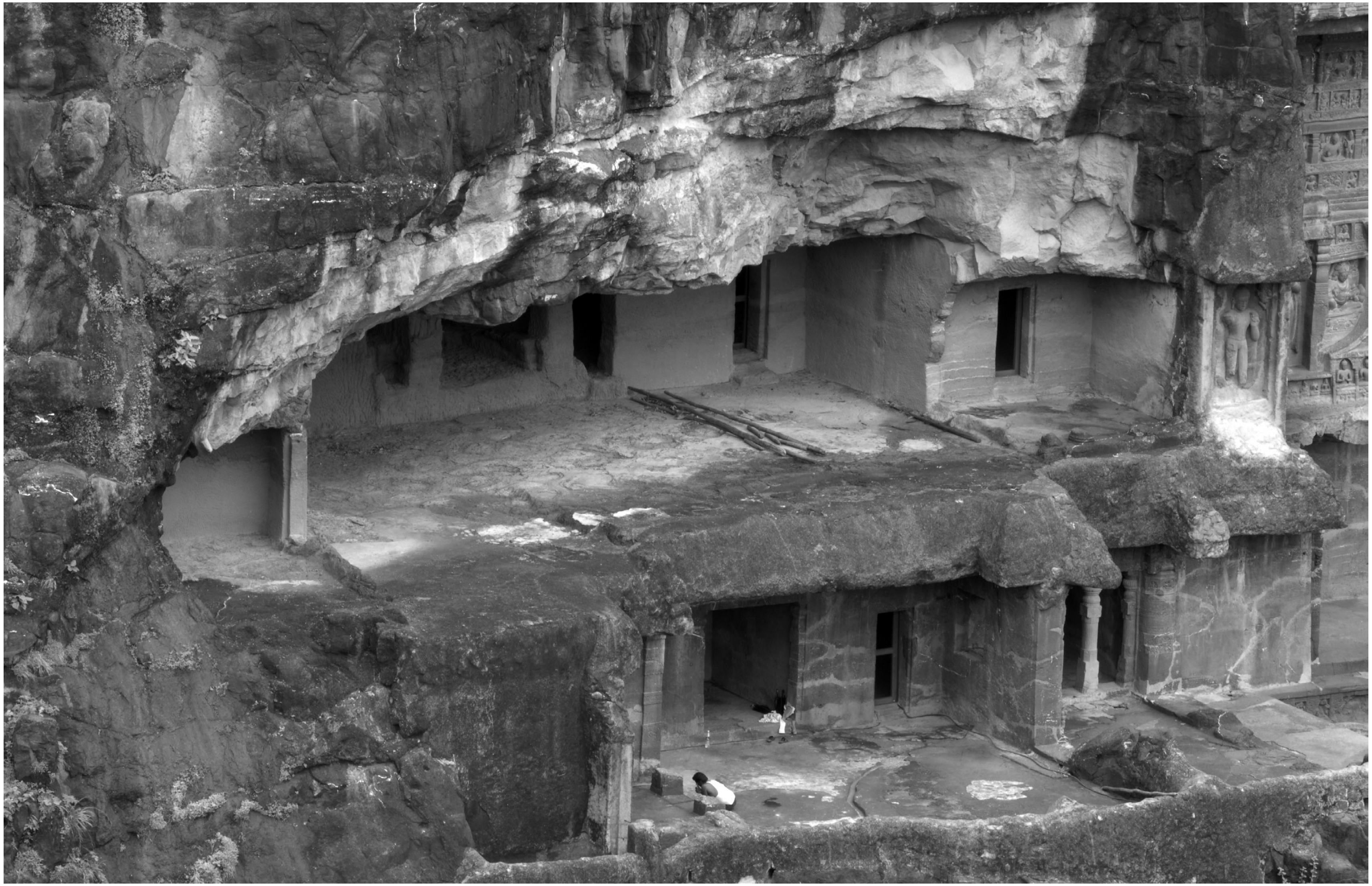
180 *The edifices patronised by monk Buddhabhadra. (Three photos digitally merged; the actual face of the cliff is not as flat as seen here.)*



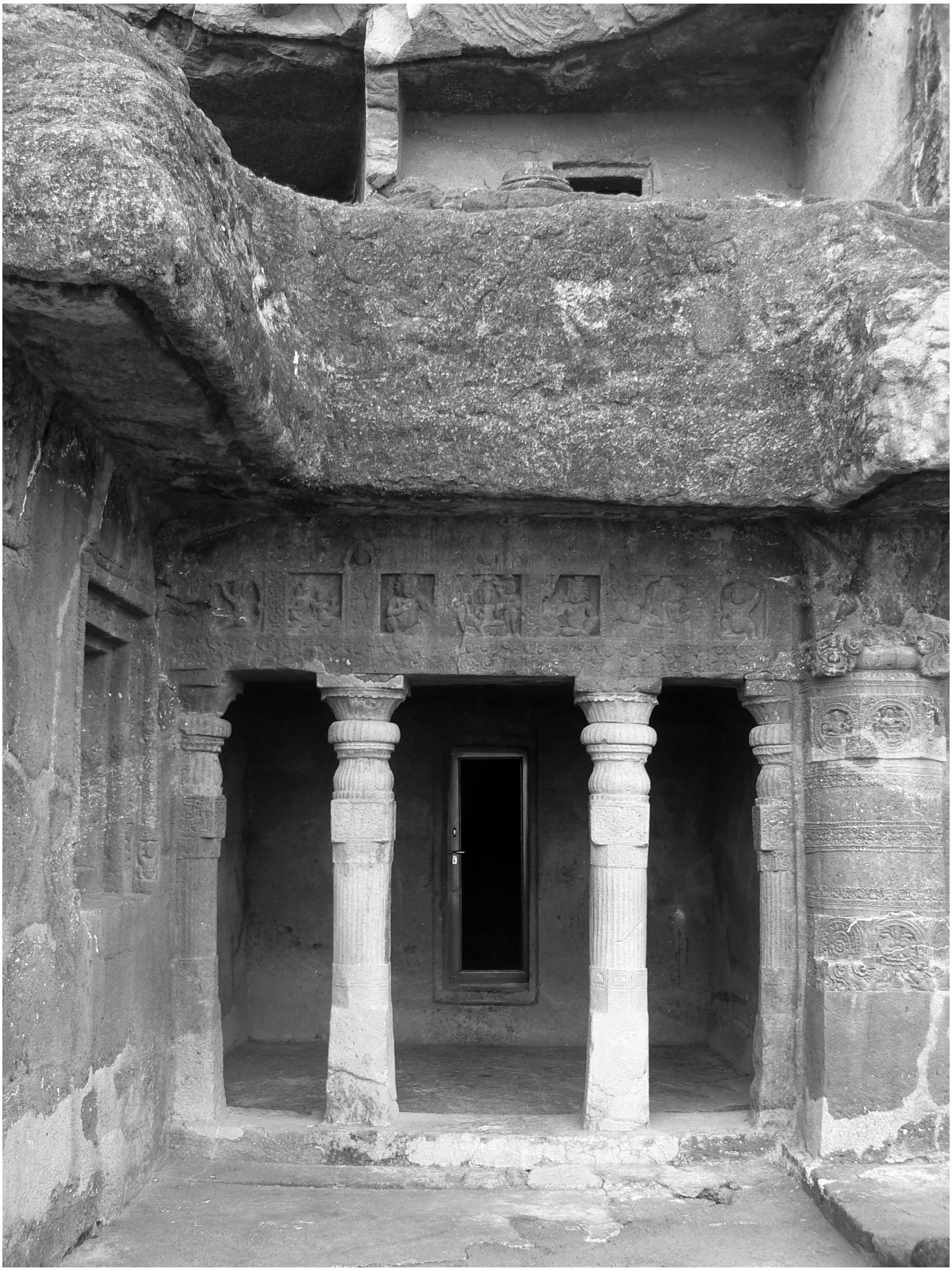
181 *Buddhabhadra's donations: the insufficient gap among the edifices created serious problems. For example, Cave 25 that was started in c. 461 while Cave 28 that was started in c. 477 CE (a little before Harisena's death) had to have cells in the hall that required some 25 ft. of additional space on the left and right interior walls. Because this space was not available Cave 25 could never afford any interior cells. On the other hand this requirement of Cave 28 made it impossible for Cave 27 to add the shrine in c. 477 CE in its logical place, i.e. the rear wall. Ultimately, Cave 27's planners selected a ridiculously odd location for the shrine, i.e. the right wall of the hall, facing the ravine. Not realising this, scholars (other than Spink and Singh) assumed Cave 27 to be facing the ravine, which is not true.*



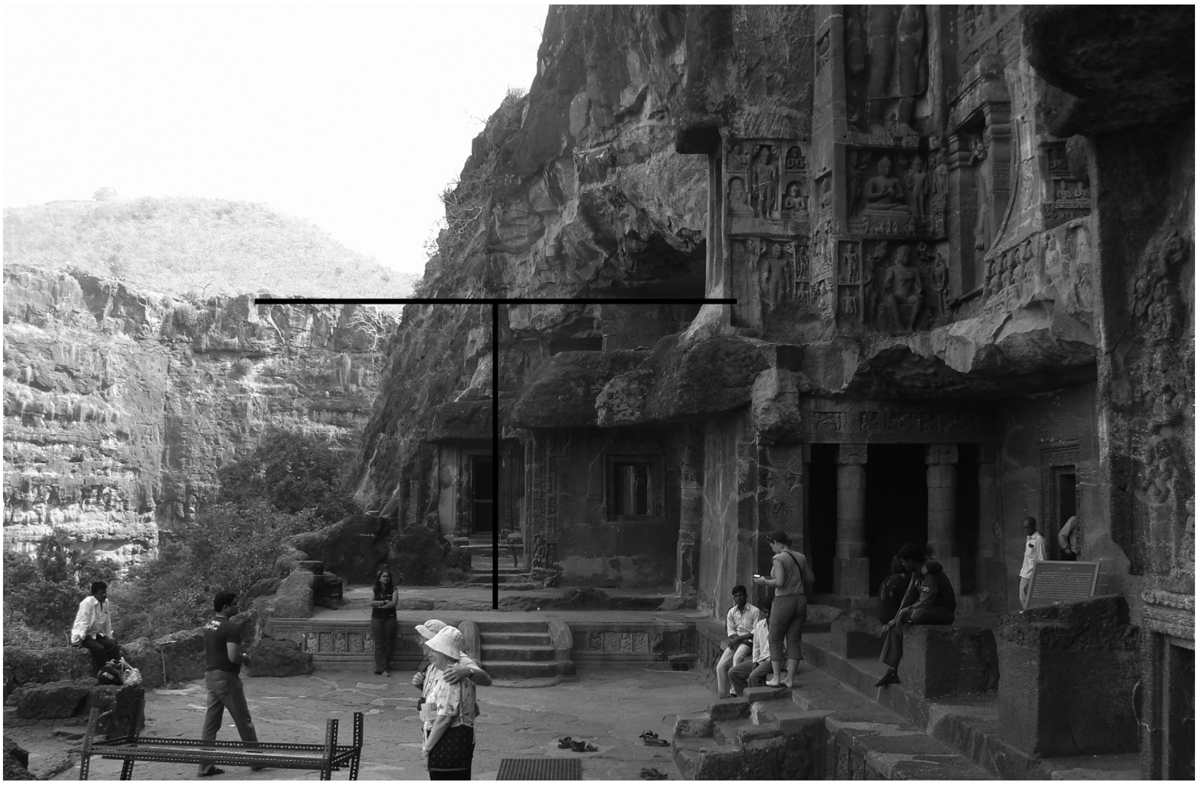
 From right to left: caves 25, 26, and 27



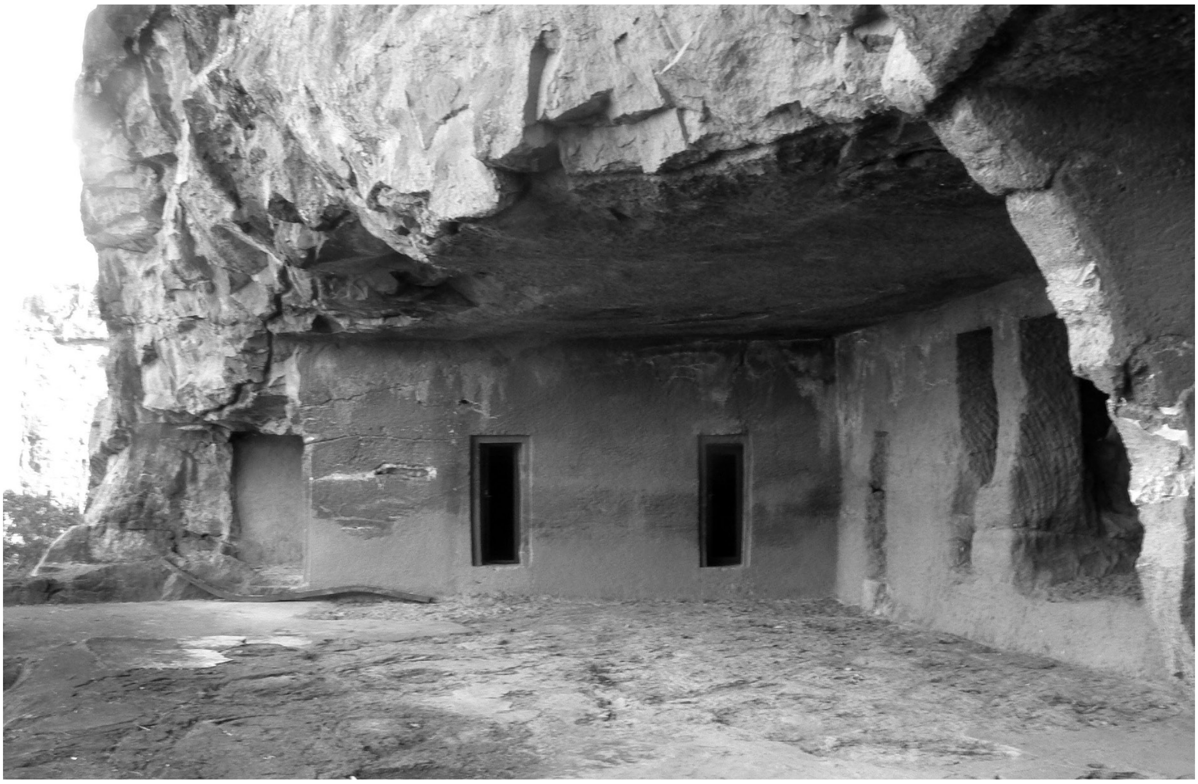
183 *Upper floor (on the left): Cave 27, i.e. the Upper Left Wing (ULW) of Cave 26. Upper floor (on the right): the inner cell of the perished pillared vestibule on the right end of the perished porch. Lower floor: the Lower Left Wing (LLW) of Cave 26 temple.*



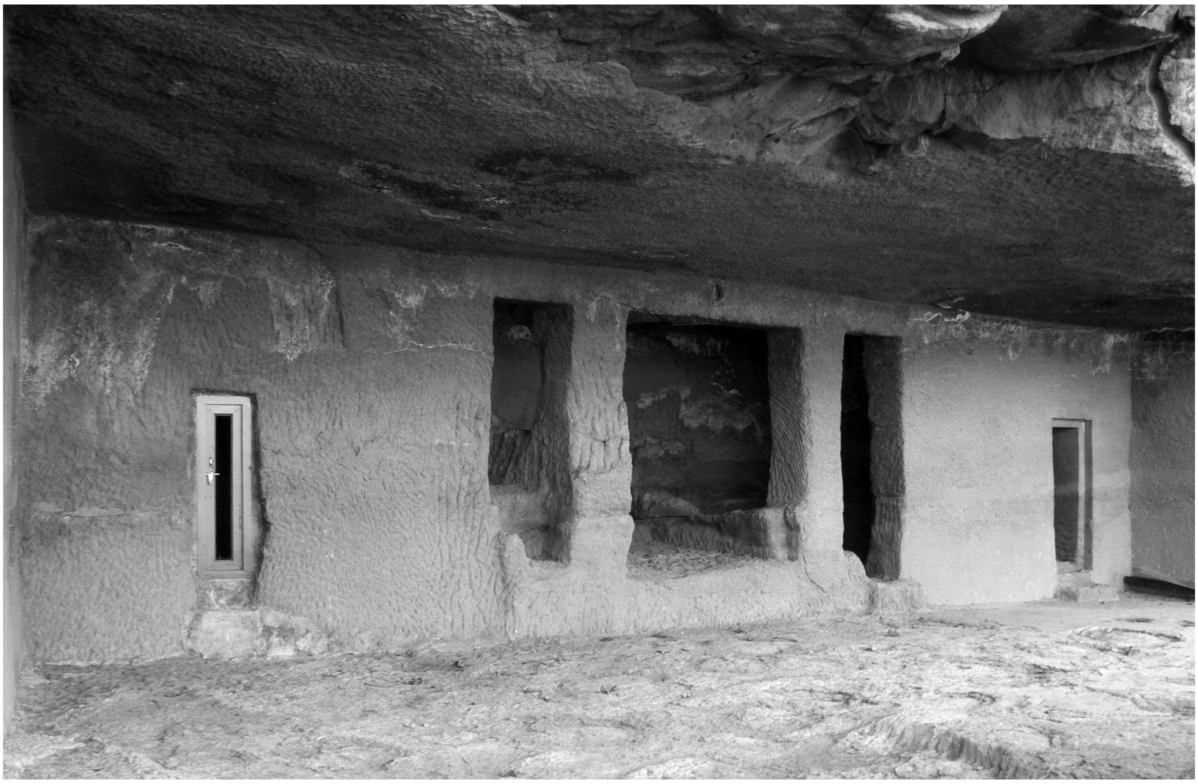
184 *Let wings of Cave 26 temple: the pillared-vestibules-with-inner-cells on the western side of the perished porch*



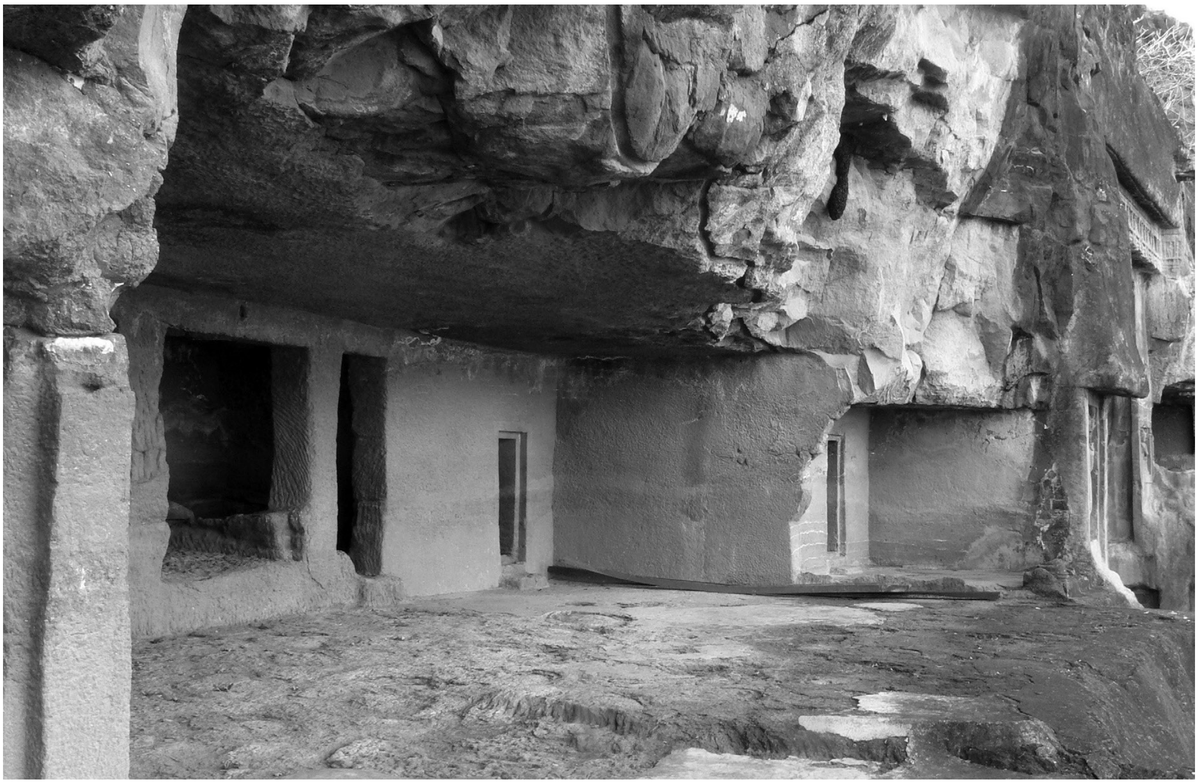
185 *Cave 26-complex, left wings: the vertical line indicates the likely axes of the two storeys. The horizontal line indicates the expectant conjectural width of the hall of the upper floor (Cave 27).*



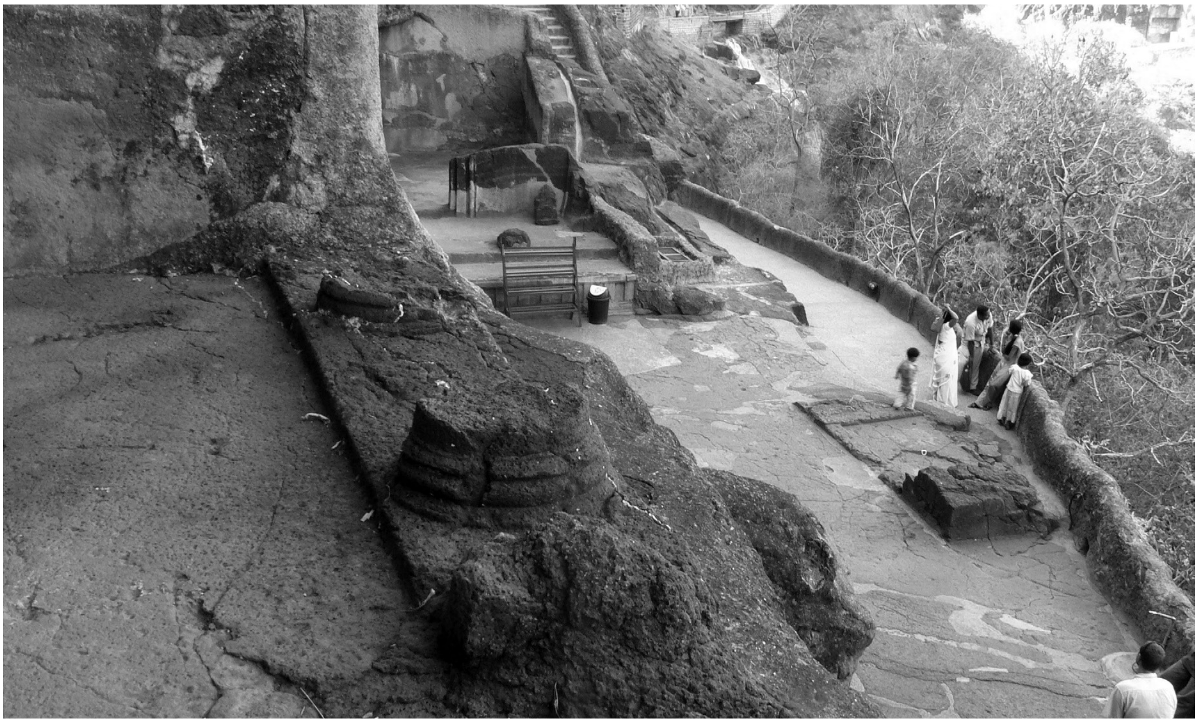
186 *Cave 27 (26-ULW), hall: extant portions of the rear (southern) wall in the background and the right (western) wall. It is this unusual location of the cave's right wall where the shrine was being excavated. It was not possible to excavate the shrine on the rear wall because it would have invaded into the space of Cave 28 (not seen here).*



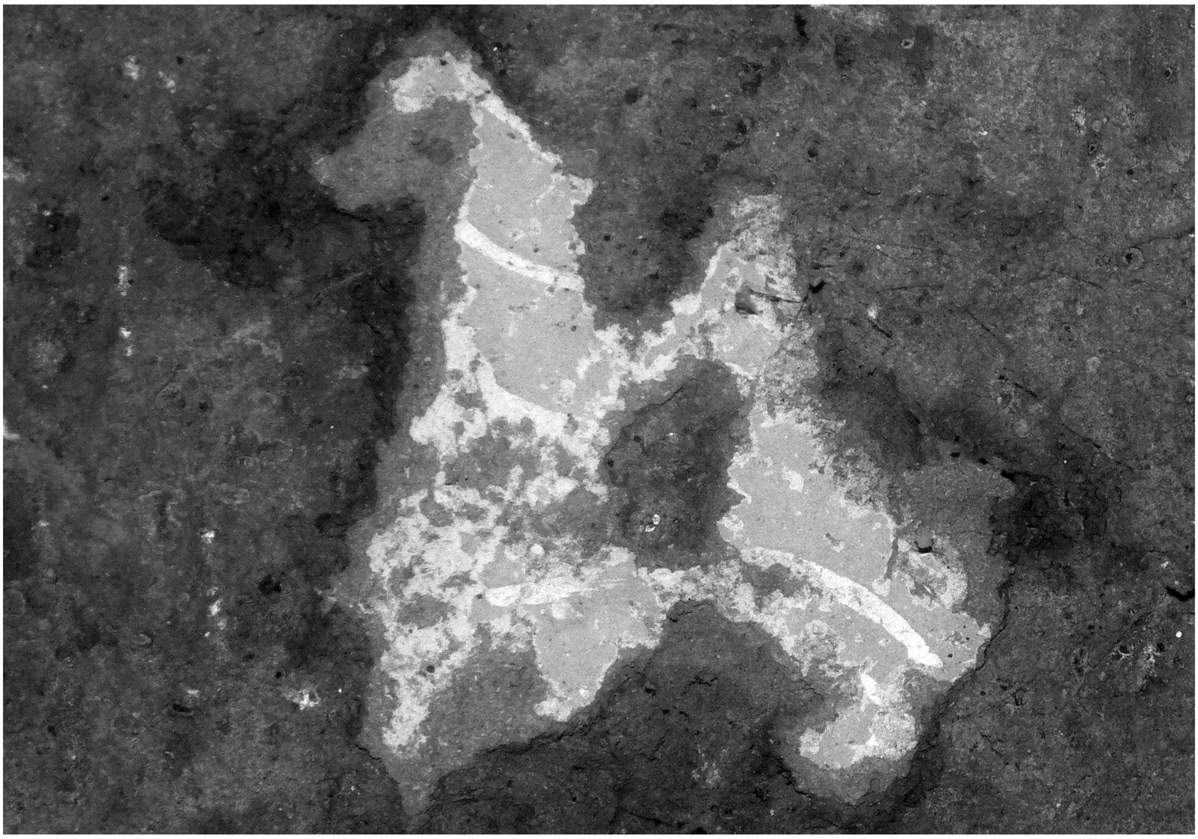
187 *Cave 27 (26-ULW), right (western) wall: it is on this odd location of the cave's right wall where the antechamber for the shrine was being excavated. It suggests that the idea of the shrine was concieved after Cave 28 (not seen here) was already started.*



188 *Cave 27 (26-ULW), the cave's right (western) and front (northern) walls are seen from the third cell of the cave's rear (southern) wall. No cell doorway is carved into the northern wall, suggesting that the northern wall is indeed the front wall of the cave. The partly perished wall in the background shows the inner cell of the perished vestibule that was excavated on the western end of the perished porch.*

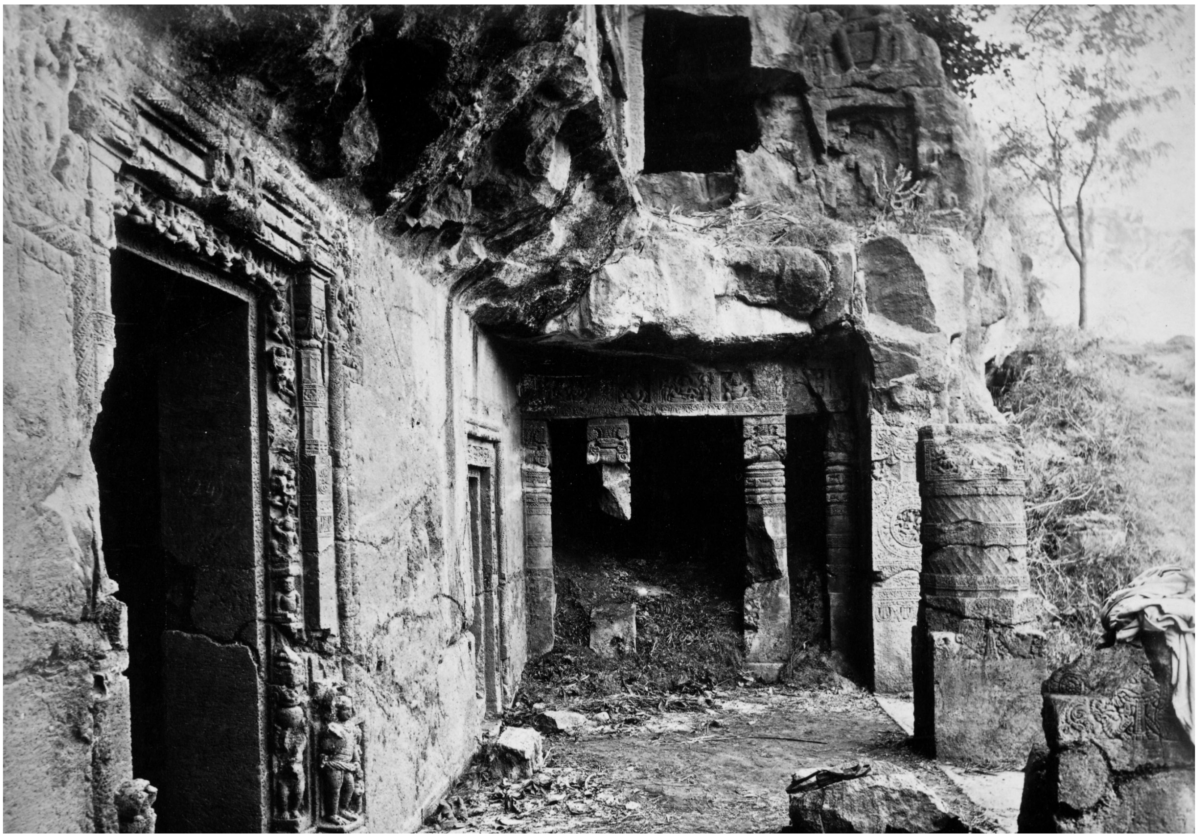


189 *Cave 27, remains of the pillars of the porch-end vestibule. In the background the remains of the torana-dvara of Cave 26-complex is extant in the front court area.*

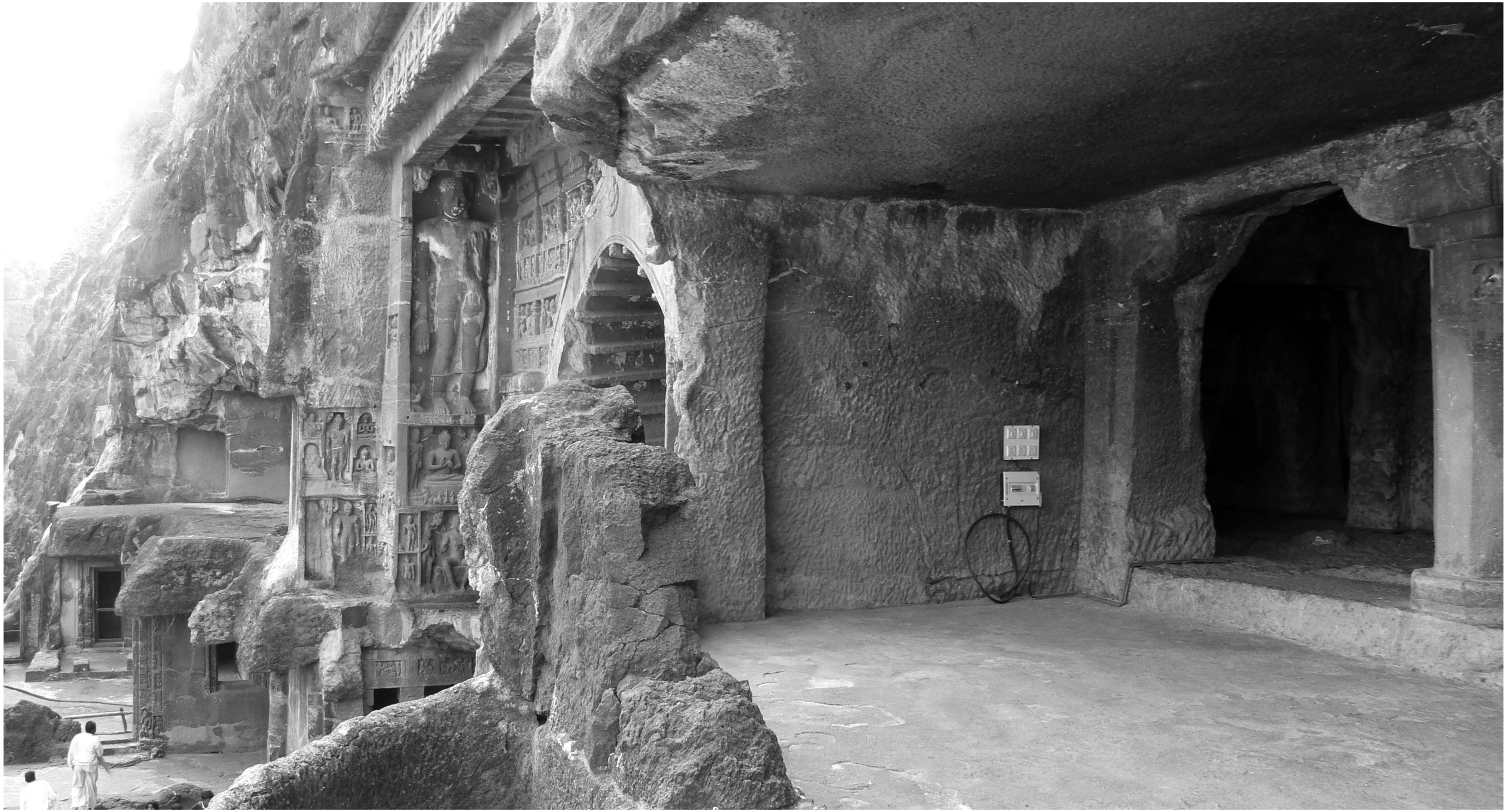


190 *Cave 27: traces of painting on the ceiling of the inner cell of the porch-end vestibule. It suggests that the edifice of Cave 27 was painted. It was after this painting work that the shrine in the hall was being excavated. Thus, Cave 27 becomes an exception on the site for not having added the shrine in c. 466 CE, that is the year when every fifth-century upasraya on the site was being converted into a temple. The reason why the shrine was not introduced in the cave in c. 466 CE is because the edifice lay virtually abandoned for nearly a decade.*

191 *Cave 25 (26-URW): presently facing eastward, the cave probably faced south in Phase I. The original hall was probably located at the site of the present courtyard of the cave. The hall had cells on the eastern, western, and northern walls. The remains of the eastern cells seem to be extant on the outer surface of what now looks like a parapet or broken wall in the foreground.*



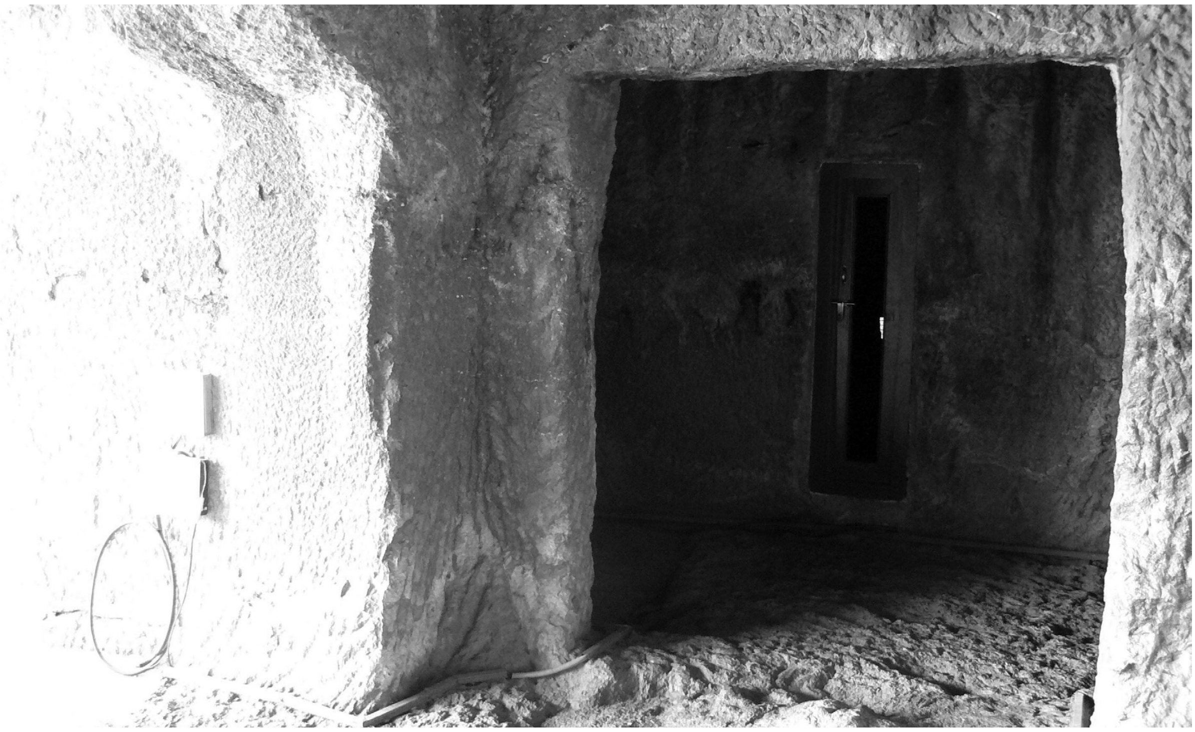
192 *Caves 26 and 25: nineteenth-century photograph by Robert Gill. The left door of Cave 25 is visible, opening towards the damaged terrace of the temple (courtesy of British Library, London).*



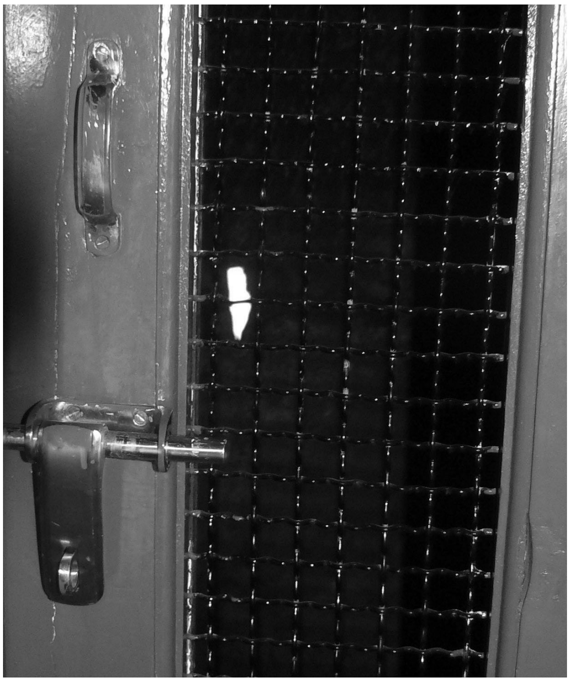
193 *Cave 25 (26-URW): what seems like a monolithic enclosure or parapet in the foreground was probably the eastern wall of the cave's hall in Phase I. The hall then faced south (towards Cave 27). On the outer surface of the wall are visible smooth corners of a cell. Further south there was probably another cell, traces of which are extant in situ (not seen here). The court on the right, planned and excavated through Phase III, had earlier accommodated the hall and surrounding cells through Phase I (facing south) and Phase II (facing east towards ravine). Re-orientation to the east was achieved after removing the eastern cells, while retaining their doorways for double doors to the hall. (The curved portion of the enclosure on the left is cement).*

194 *Cave 25 (26-URW): the ceiling of the front court shows a layer of volcanic lava flow. The layer apparantly created a problem through Phase I of excavation.*

195 *Cave 25 (26-URW): tbeneath the uncut matrix of rock or the monolithic cubical platform on the floor is the left outer cell of Cave 24.*

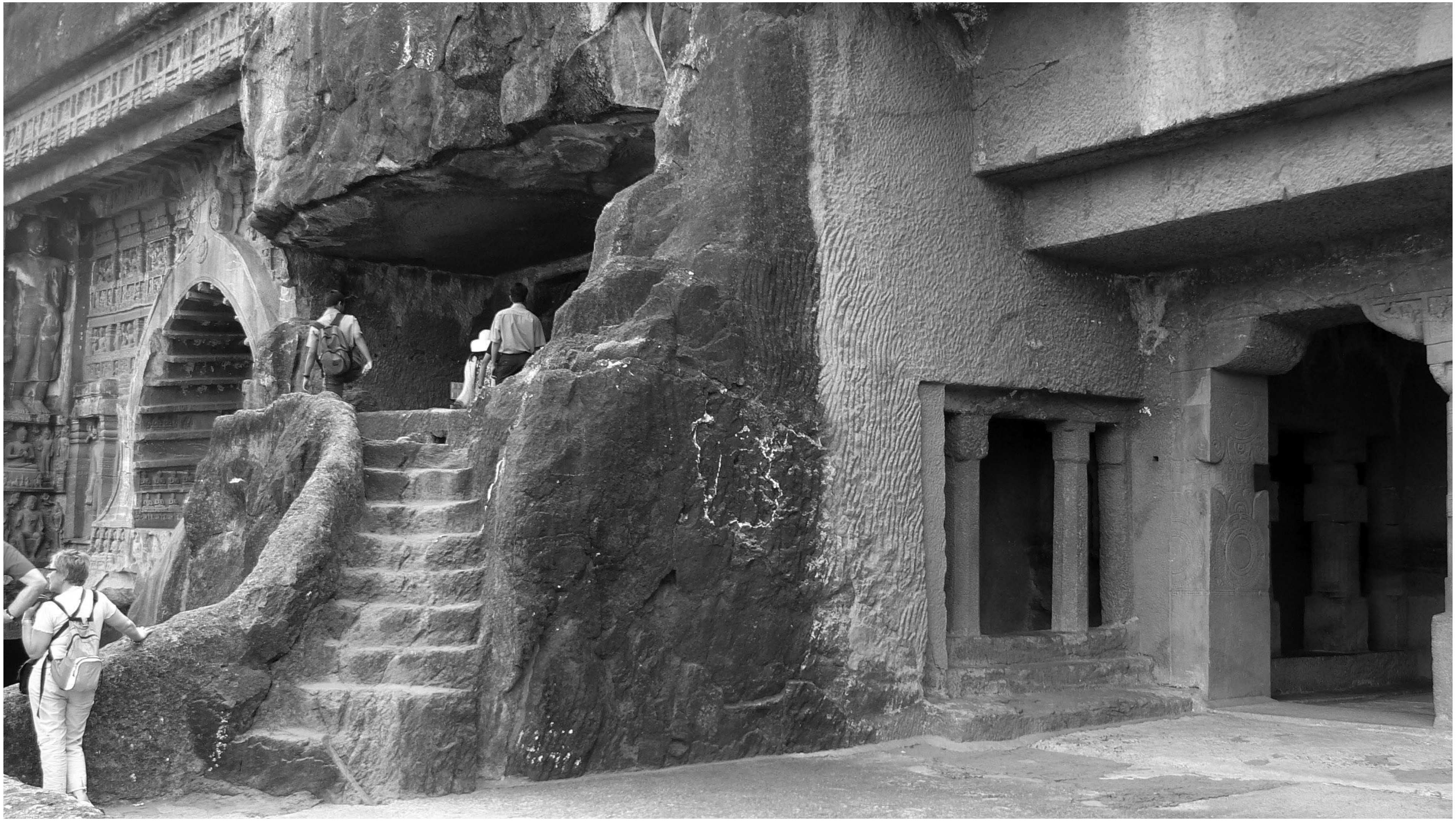


196 *Cave 25, left porch-end vestibule: neither the vestibule nor its inner cells have any counterpart on the opposite (north end) of the porch. This is because when the idea of the vestibule emerged in c. 465 CE, Cave 24 had already started on the cave's northern side leaving no space or scope for the counterpart. The absence of pillars here suggest that it is among the earliest few such vestibules on the site.*



197 *Cave 25, detail of fig. 196. The hole in an inner cell of porch-end vestibule. The hole appearing white due to incoming light from the other side, can also be seen from inside the nave of Cave 26 temple. It suggests that the vault, including the rock-beams and rafters of the temple, were already carved when the masons by mistake broke the vault while excavating this cell.*

198 *Cave 26-complex, the cistern: probably excavated before the lower wings, the cistern defined the limits for the LRW. It constricted the space available for the creation of LRW.*

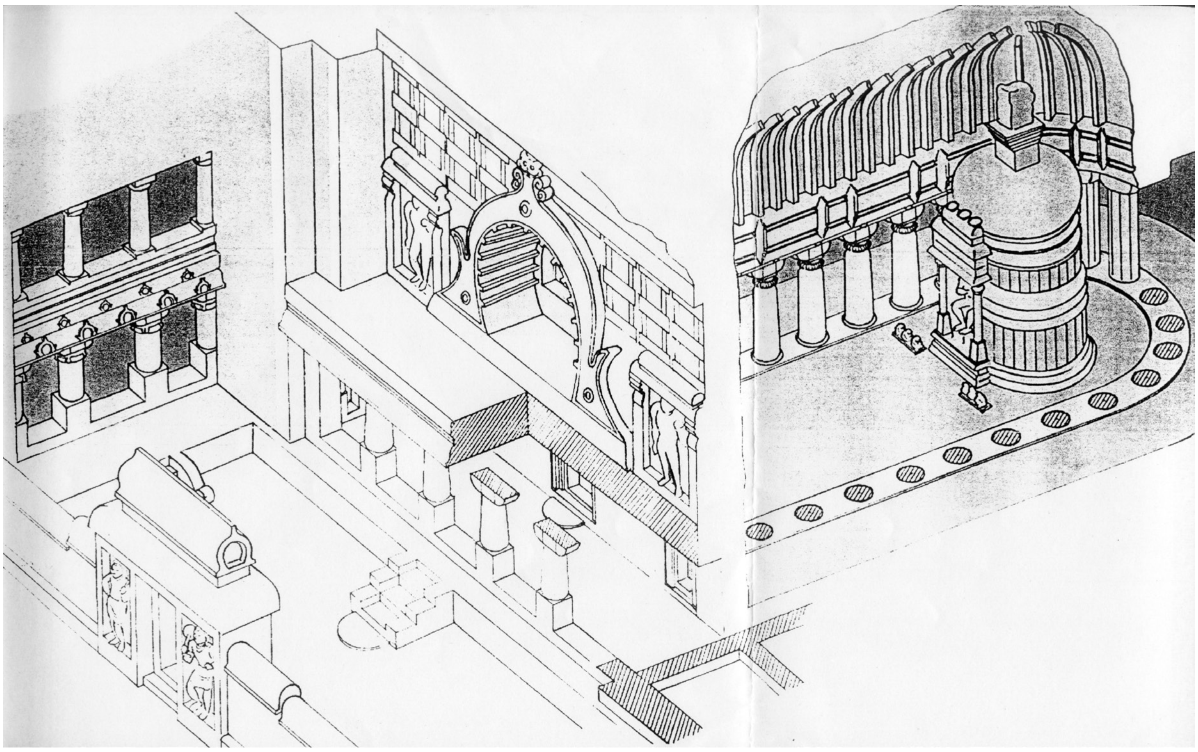


199 *Right to left: Caves 24, 25, and 26. Due to the left outer cell (later a shrine) of Cave 24, the floor of Cave 25 above could not be fully cut. The staircase was excavated in a later phase as a substitute to the earlier entrance from the terrace of Cave 26, which had become inconvenient after the lower half of the temple was revealed.*

200 *Cave 26-complex, the doorway for access to Cave 24. Walter M. Spink examining the partially extant doorway leading to the staircase for reaching up to Cave 24. This access is till used today for connecting all of Buddhabhadra's edifices. It is an important evidence suggesting that Cave 24 is integrally related within the plan of Cave 26-complex; a fact when analysed with other evidence also indicates that monk Buddhabhadra was also the donor of Caves 21, 23, and 24. Thus, these edifices too were begun as adjuncts to the Cave 26 temple.*

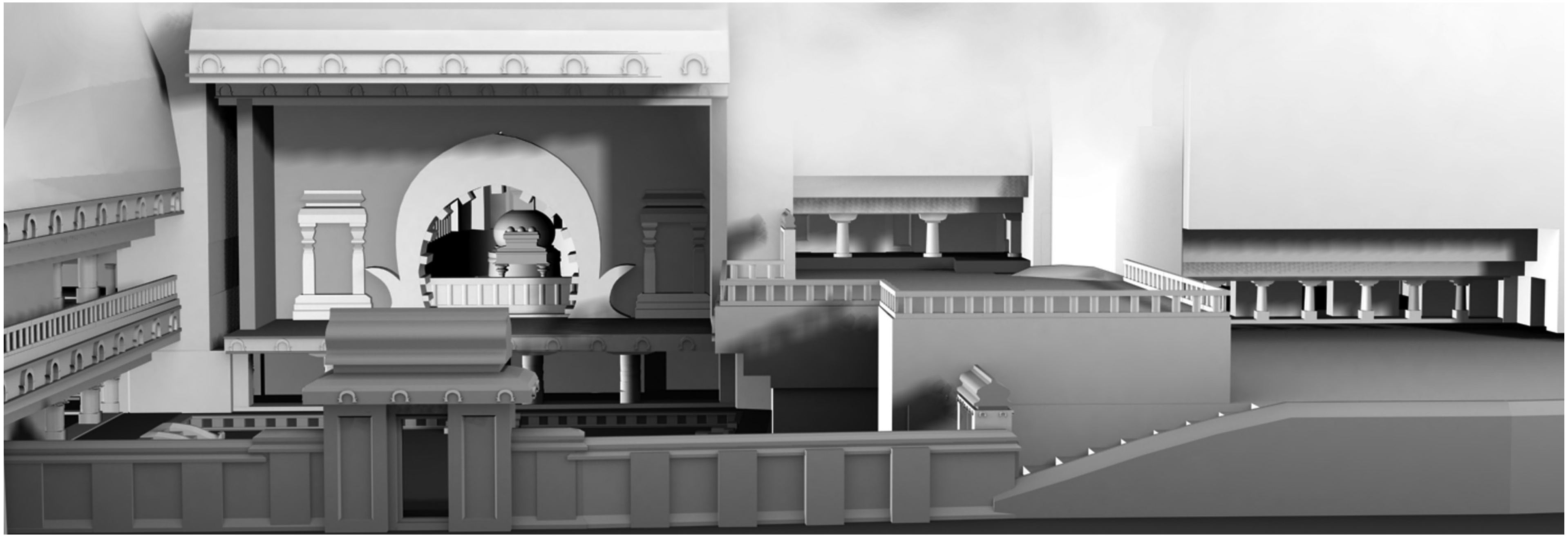
201 *Loose yaksa figure: situated in the ravine directly below Cave 26, this loose yaksa figure certainly belonged to the torana-dvara of Cave 26-complex, which has altogether perished now.*

202 *Kondane caityagrha: similar facade decorations must have existed around the complex of Ajanta Cave 26.*

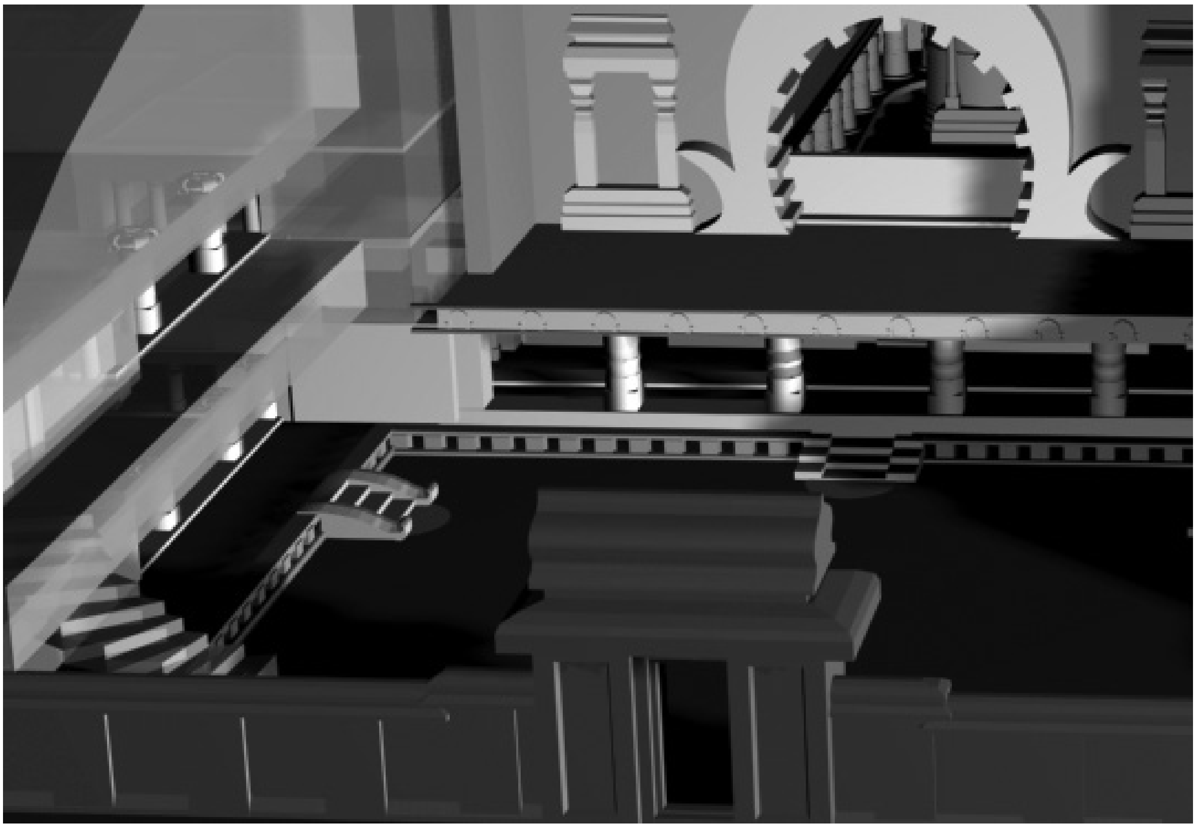


203 *Cave 26-complex: Spink's conjectural reconstruction (courtesy of Spink. Line drawing: Ajeet Rao and Nitin Veturkar)*

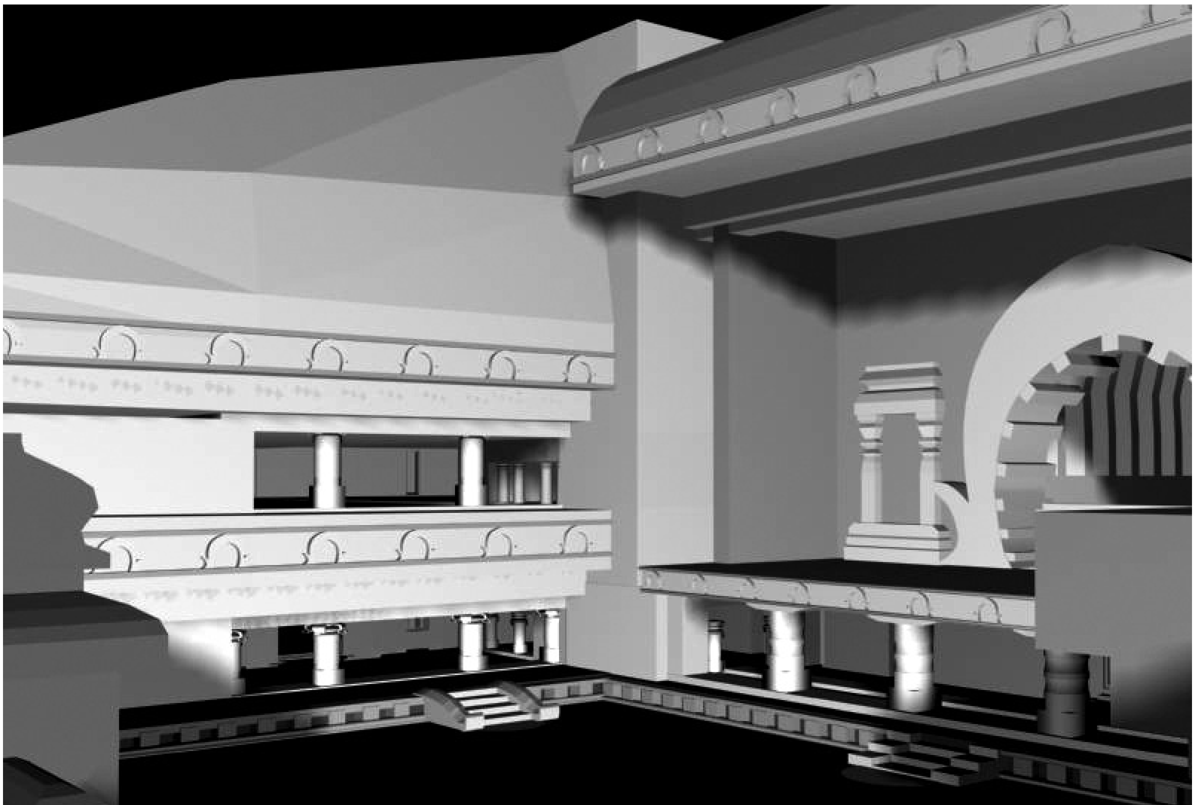
204 *Cave 26, interior, left wall: Mahaparinirvana of the Buddha (3 photos digitally merged)*



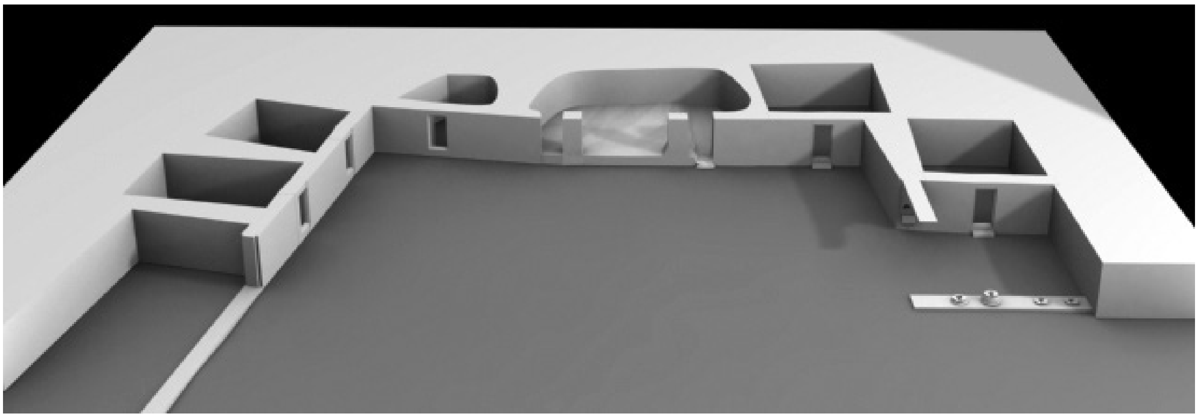
205 *Cave 26-complex. View 1: conjectural 3D reconstruction. (Any imperfect or imprecise detailing here and in the subsequent 3D images is regretted. The aim is solely to indicate the dispostition of the various architectural units before the gradual damage.)*



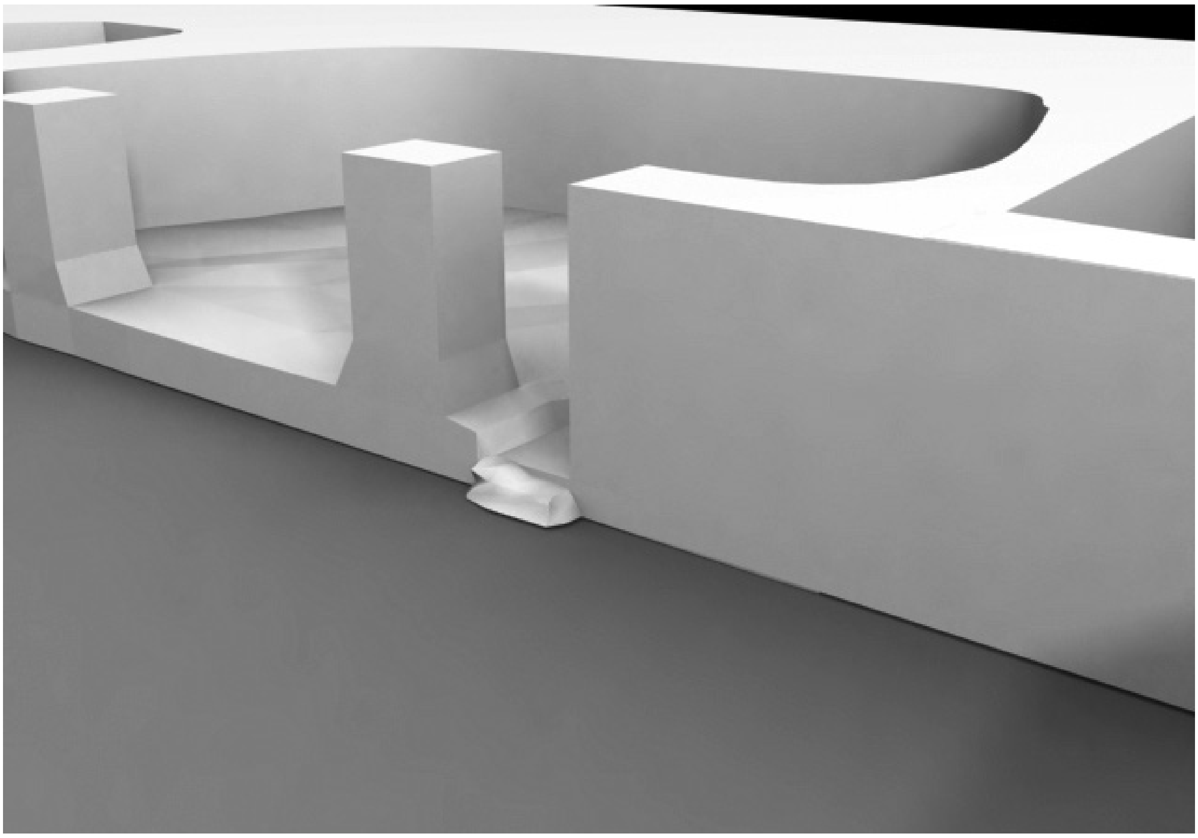
206 *Cave 26-complex. View 2: conjectural 3D reconstruction.*



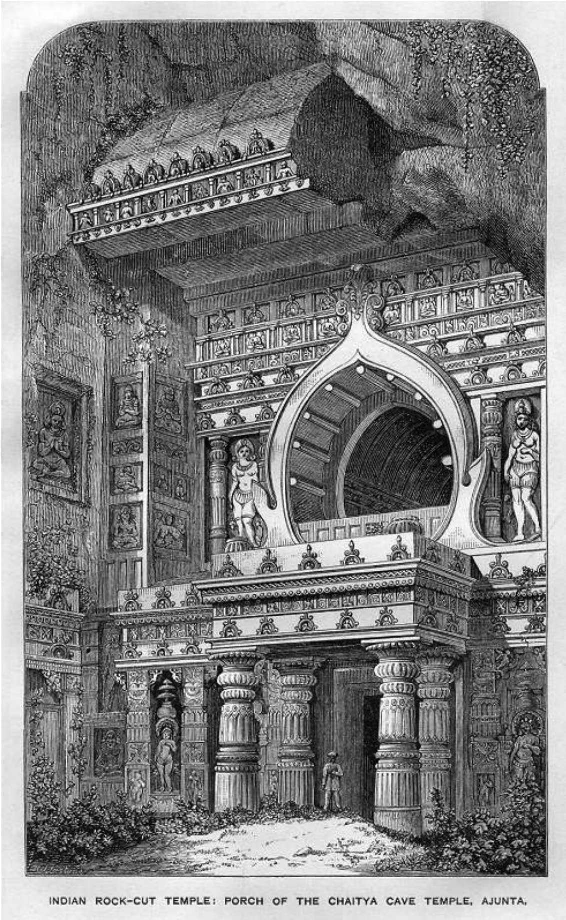
207 *Cave 26-complex. View 3: conjectural 3D reconstruction. The left wings are seen here. The upper floor is numbered 27, but the lower floor is not numbered.*



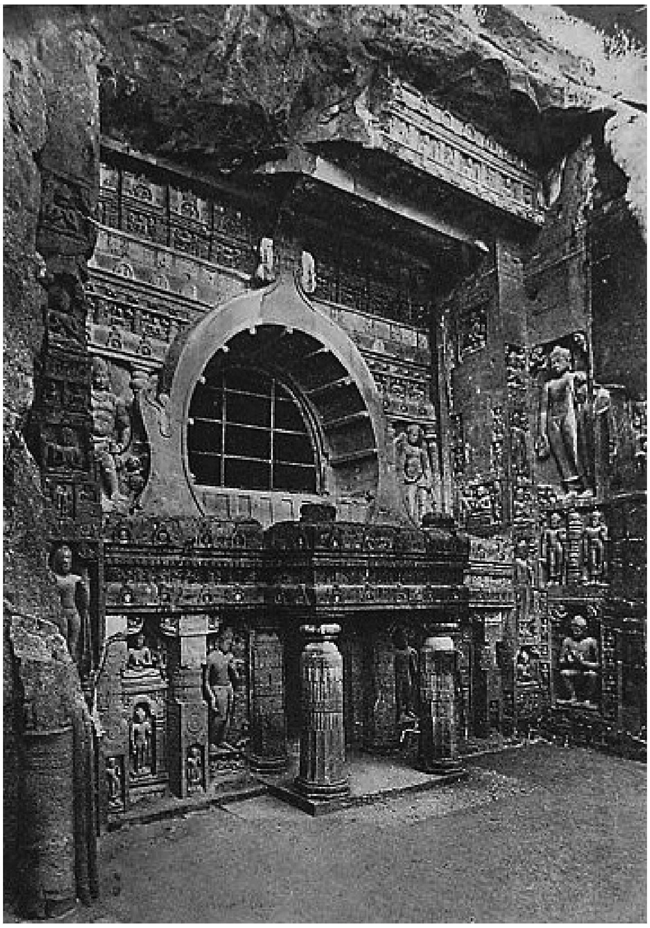
208 *Cave 27: conjectural 3D reconstruction of the extant remains; based on the ground plan by Yazdani (1952).*



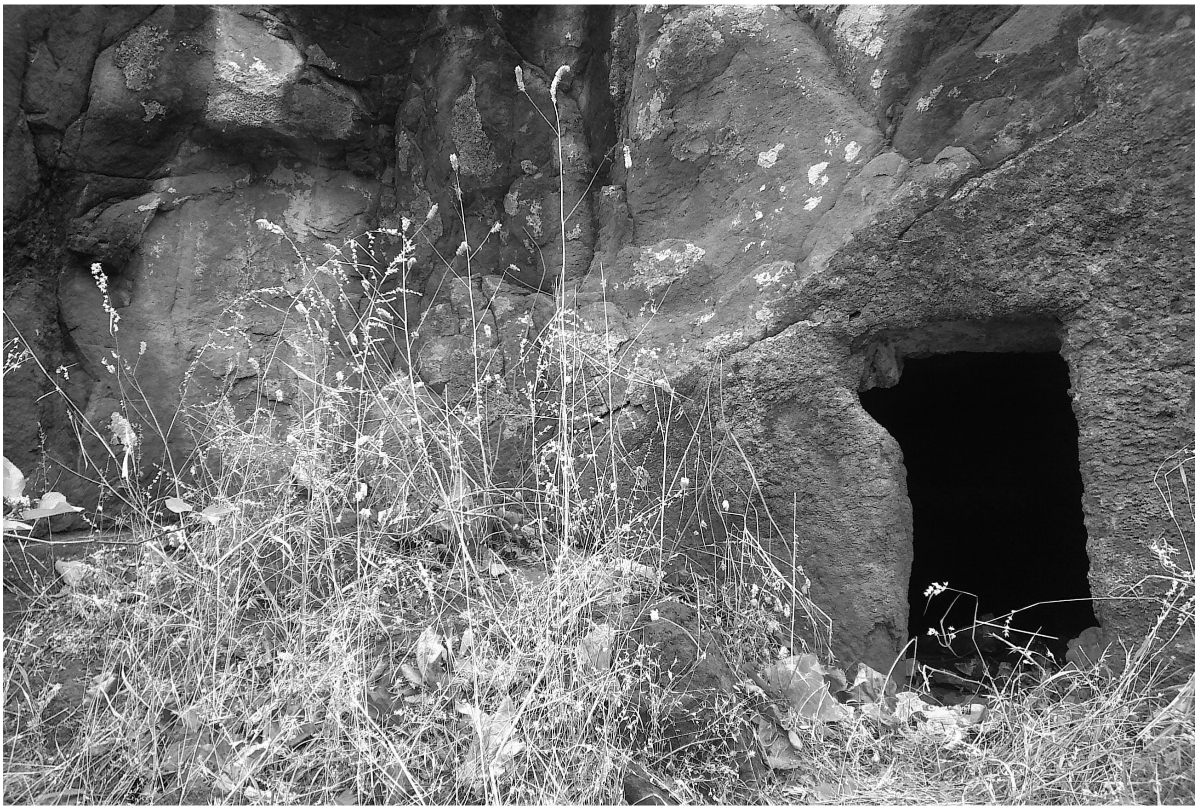
209 *Cave 27, shrine antechamber: detail from fig. 207. Notic the remains of a step that belongs to the earlier cell doorway.*



210 *Ajanta Cave 19, woodcut, late nineteenth century. In spite of the inaccurate depiction of several figures, designs, and motifs the basic structure of the edifice has been captured here. Notice the large and beautifully decorated canopy overhanging the facade. A similar canopy must have existed in Cave 26 (started earlier), scant traces of which were extant in the nineteenth century, as can be noticed in certain old photographs.*



211 *Cave 19, photograph, nineteenth century. The remains of the canopy or eaves are seen clearly here. Similar eaves were likely provided in Cave 26.*



212 *Cave 26A: this small cave was exposed during 2010-2012 while clearing the debris and overgrowth. The cave is located below Cave 26. Its elevation is somewhere between the river bed and Cave 26. It is just a cell measuring about 8 sq. feet inside.*

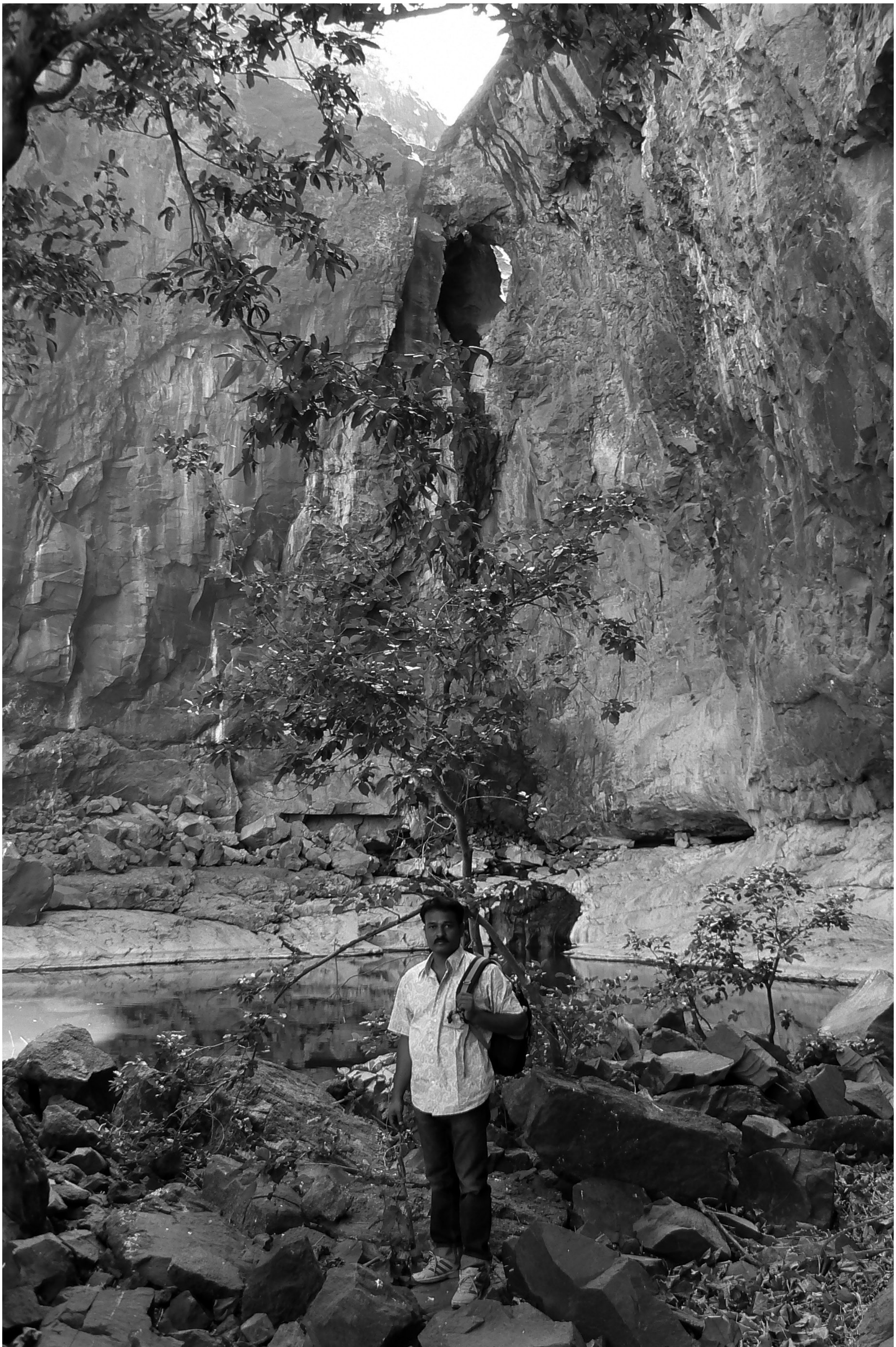
213 *Cave 26A: another view of the newly rediscovered cave. I inspected the cave from outside and inside. No inscription, painting, sculpture, or carving was noticed. The period of this cave remains to be investigated.*

214 *Cave 29: the stupa temple is half cut from the top, but in the interior the excavation was already reached to the full depth. So far my written requests for permission to reach up to the cave have not been granted, although the workers do go there for cleaning. Spink says that this stupa temple is closely aligned to winter solstice. In my view, the alignment is to the Buddhist uposathas of the winters.*

215 *Ghatotkach cave: the name is a misnomer. This large mandapa, unfortunately under the state archaeology department, is poorly maintained. It was donated by Varahadeva, the donor of Ajanta Cave 16. Varahadeva was the prime minister of the Vakataka Empire under Harisena. This little explored mandapa has a fascinating story of development.*

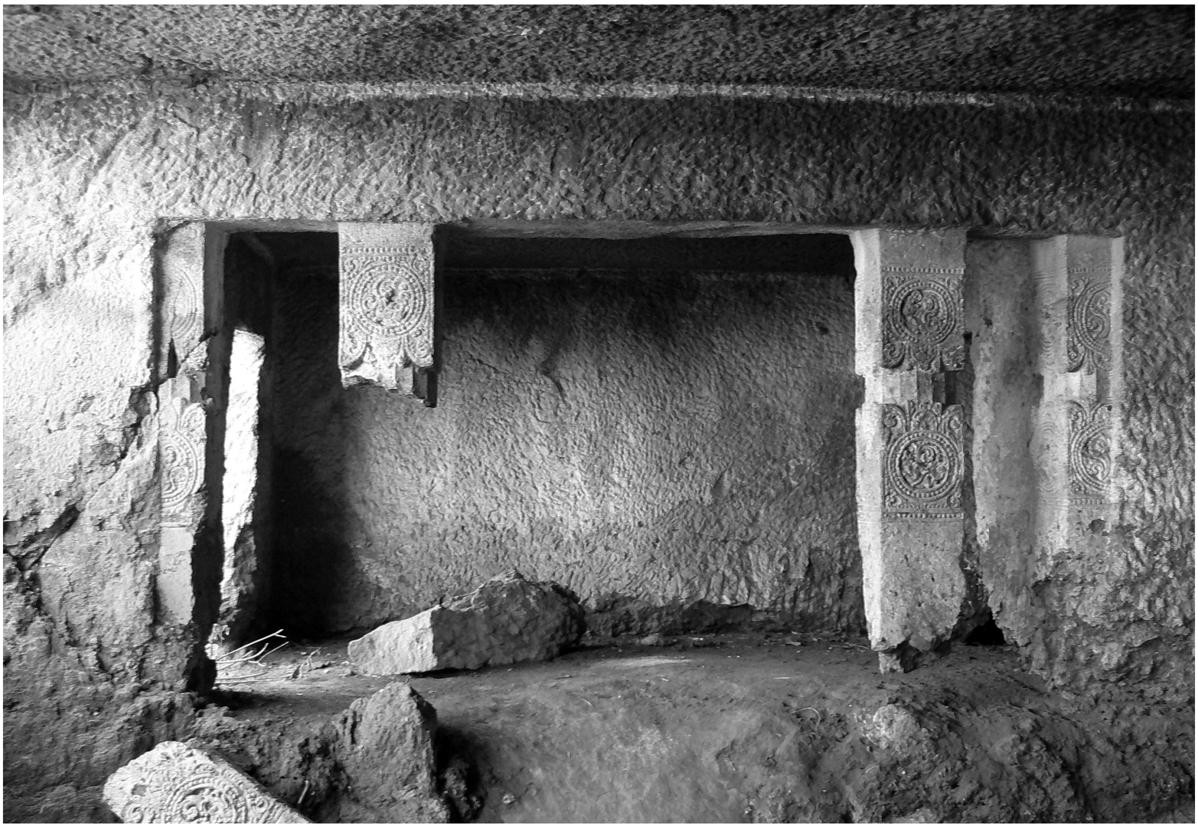
216 *On way to the still secluded Banoti caves one is accompanied by this lonely revulet and picturesque surroundings. These pictures about Banoti caves are being reproduced for the first time. Reaching there involves about 10 km of trekking. By a 2-wheeler, the trek is reduced by half.*

217 *At the Banoti caves: at the foot of the waterfall near the Banoti caves, one finds natural caves that are conserably deep.*



218 *The researcher (R. K. Singh) at the Banoti waterfall site. The hole on the cliff above is the source of the waterfall making it one of the most unique and picturesque waterfalls.*

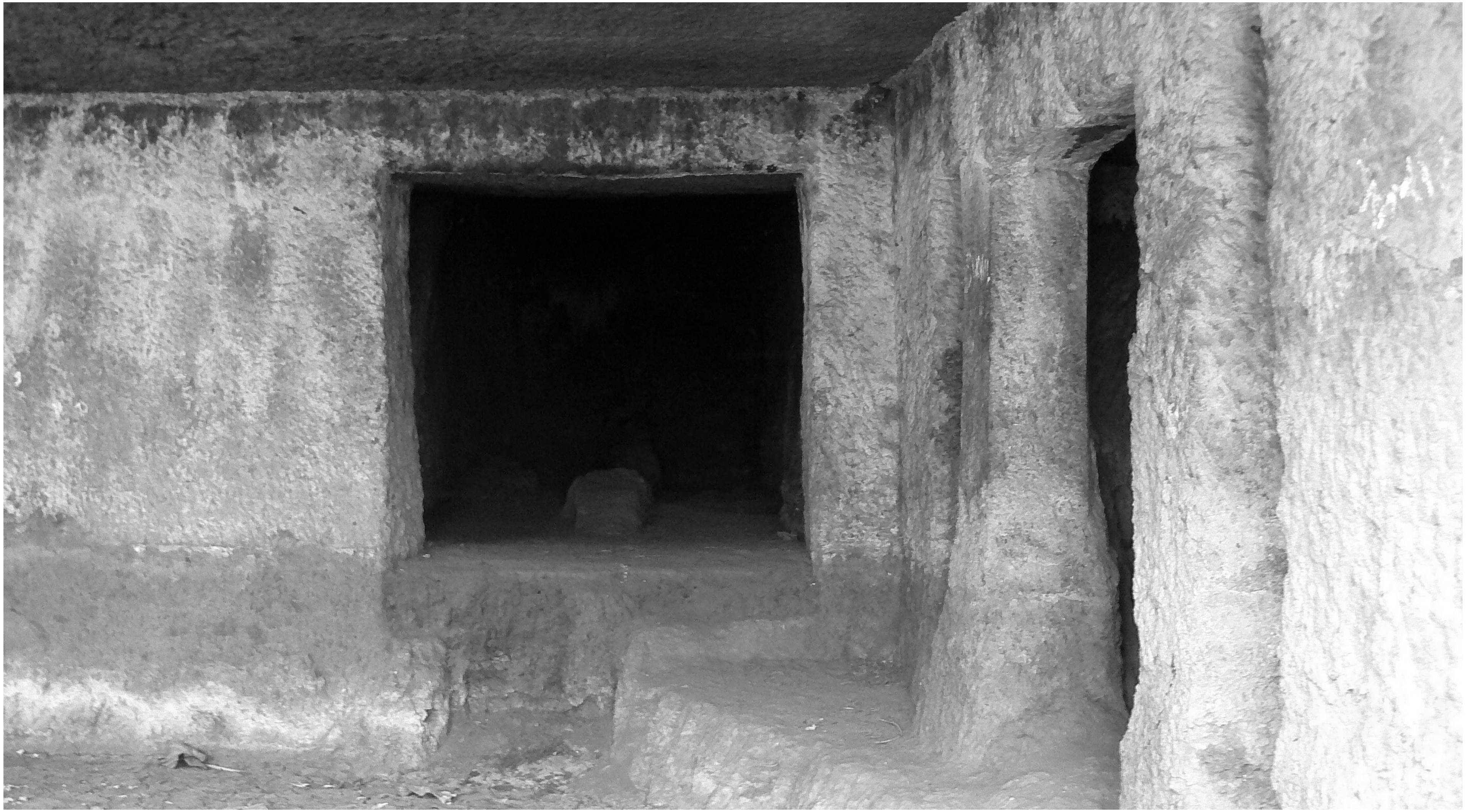
219 *Banoti mandapa, porch: it is a very spacious porch resembling the latest started mandapas of Ajanta, viz. caves 7, 21, 23, and 24. Initially a Buddhist cave, there was an attempt to convert it to a Siva cave temple. Perhaps the mandapa was started in circa 476 CE, shortly before Harisena's death, and the original grand plan was abandoned in the chaos after Harisena's sudden death in c. 477 CE.*



220 *Banoti mandapa, porch, left-end pillared vestibule with inner cells. Based on the Ajanta pattern, the pillared vestibule is rather closely related to the Ghatotkacha example.*

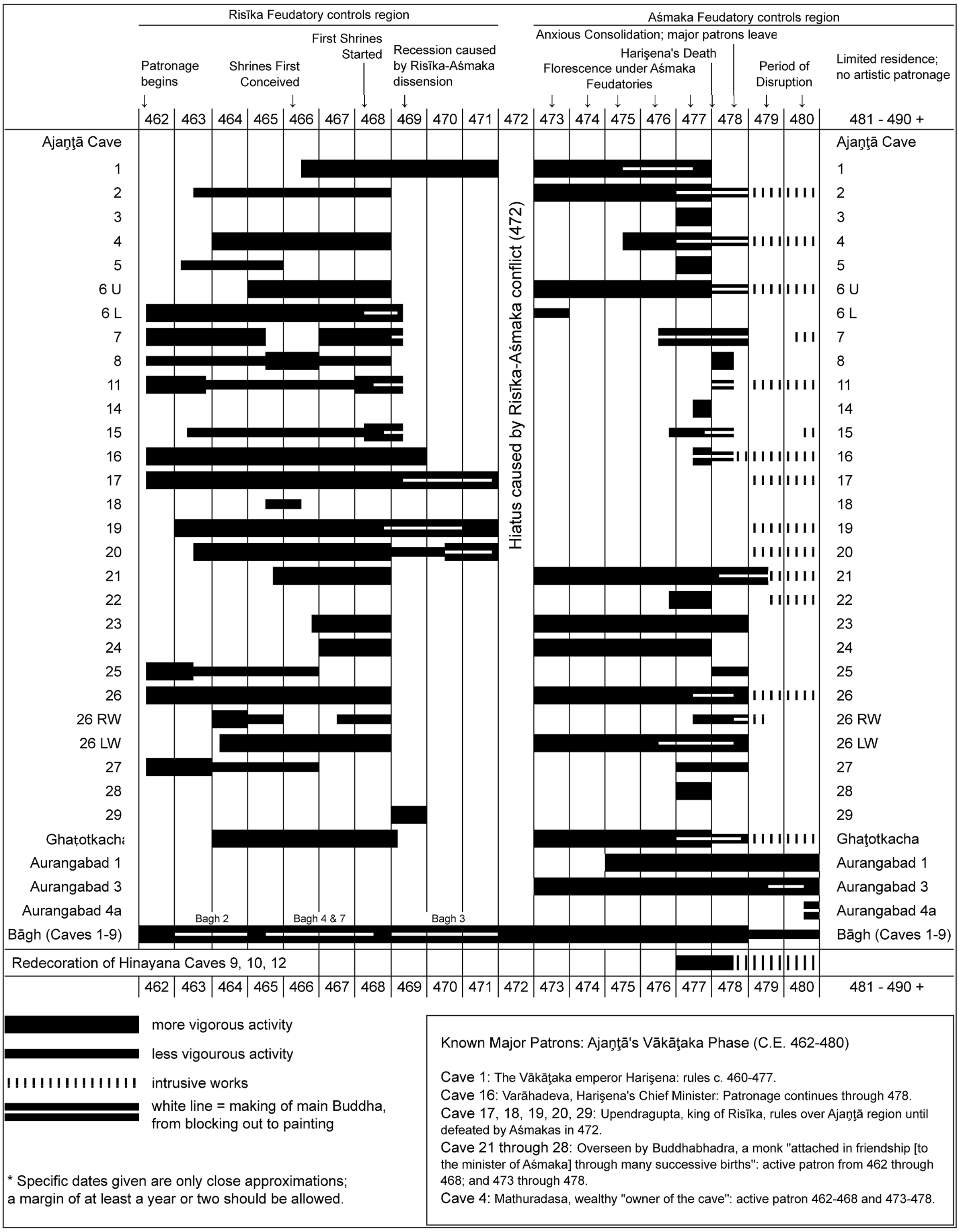
221 *Banoti mandapa, the pillared shrine antechamber with the shrine. Like Ajanta Cave 7, this mandapa was planned to have a spacious hall, but was compelled to abandon the idea of the hall, and created the shrine with antechamber directly on the rear wall of the porch.*

222 *Banoti mandapa, the shrine doorway*

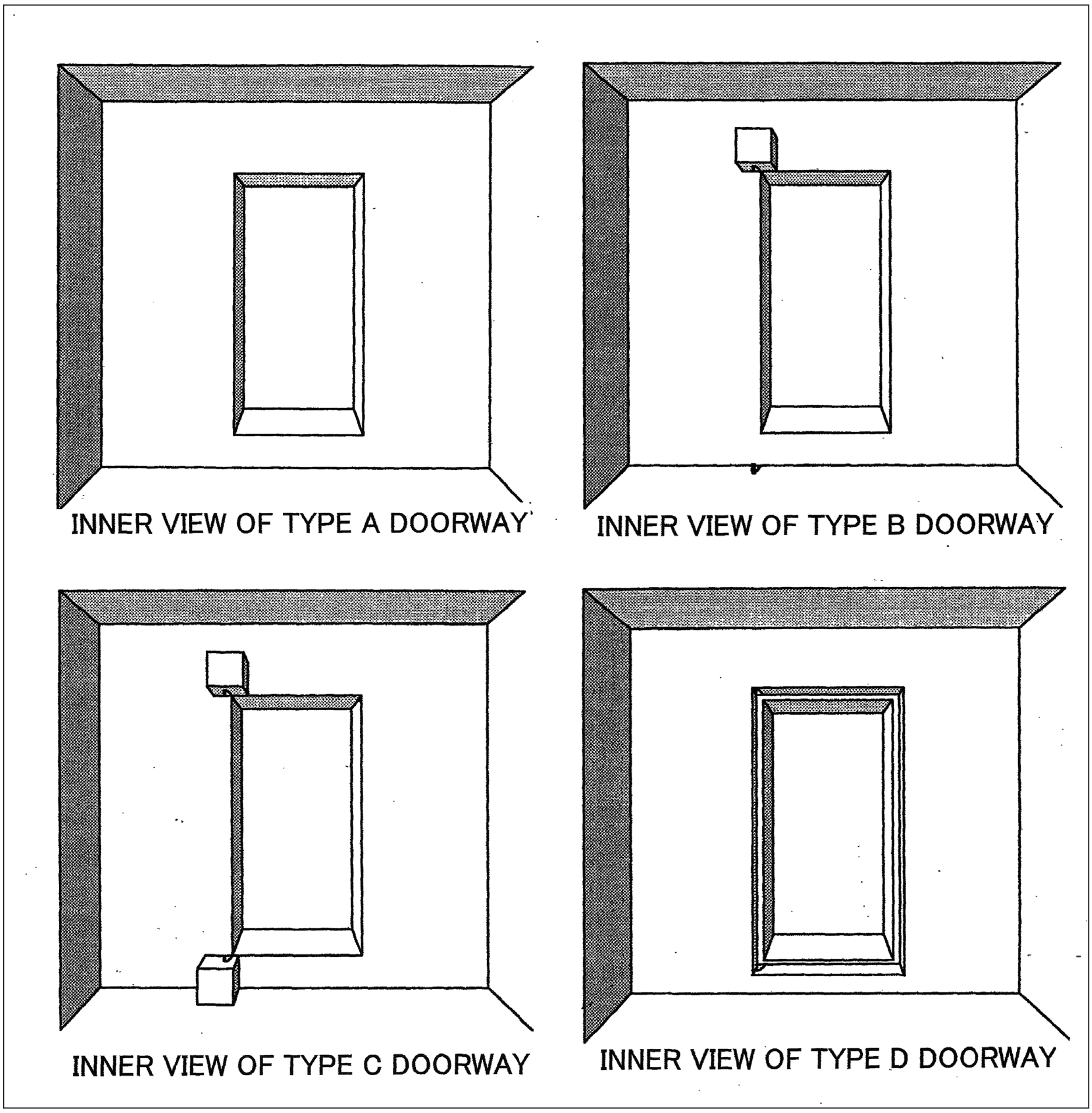


223 *Banoti mandapa: the right-end pillared vestibule is seen on the right. The high and wide opening seen in the background are typically seen at Aurangabad. Apparantly, in a later period, probably after the edifice was converted to a Siva temple, there was an attempt here to carve a Siva shrine or more likely, a pradaksina-patha round the shrine (fig. 220). Such a thing is never seen at Ajanta, but becomes common at Aurangabad and Ellora. Thus, the Banoti experiment may be the crucial link between Ajanta and Aurangabad. It was the situations that created such a plan, and not necessarily any special considerations for a tantra-centric plan, which Pia Brancaccio has envisaged for Aurangabad.*

224 *Banoti mandapa, porch, right pilaster: the designs are of the latest type seen at Ajanta Caves 21, 23, and 24. These are also found at Ghatotkacha, Aurangabad, and Bagh--all withiin the dominion of Emperor Harisena. The image of Siva Nataraja is noteworthy, since that indicates the date of the design, which must be post c. 477 CE, i.e. after Harisena's death. The Banoti Siva motif is further indication of the possibility that the entire Vakataka dominion was engulfed in an aggressive wave of Hinduism, and the Buddhists were likely expelled not only from these regions but also from the Vakataka kingdom after the sudden death or murder of the liberally minded Emperor Harisena. No wonder why Ajanta, Ghatotkacha, Banoti, and Aurangabad--all the Buddhist monastic sites suddenly and abruptly slept in the centuries of oblivion.*



225 *Spink's time chart; source: Spink, Ajanta: History and Development, vol. 6 (Brill: 2012); drawing: N. Yaguchi.*



226 *Spink's classification of the four types of Ajanta cell door modes; source: Spink, Ajanta: History and Development, vol. 4 (Brill: 2005), fig. 36; drawing: N. Yaguchi.*

DEFINING FEATURES
for the
Vakataka Phase at Ajanta
462-470 A. D.

Location	462-466	Along main scarp development was (generally) from center to either side.
		At western (Asmaka) end, Cave 26 complex first; then from 21, 23, 24, 28.
	477	All unfinished caves at upper level started late, probably in 477
Excavation technique	462-468	Sidewalls angle out, ceilings up, as cutting moves rearward
	469-477	Walls and ceilings increasingly level as technical control improves
	462-477	Early caves have greater interior height, following structural precedents.
	475-477	(Lower ceilings cheaper; interiors better cooled by mountain mass.)
Astylar interiors	462-464	Earliest viharas follow Hinayana precedents; no hall pillars.
		Plans for larger courtly caves (4, 16, 17, etc) already included peristyle.
	466&later	Axial intercolumniation wider (or widened)
Porch ends	462-465	End walls blank, following Hinayana precedents
	466-467	Simple cells cut at either end; especially in 466
	467-477	Cells fronted by pillared vestibules; standard from 468 on.
	475-477	Nagas and yaksa groups carved over fronting pillars
	477 only	Pillared complexes in court if possible; all unfinished
Pillars	462-466	Shafts roughed out square, then defined octagonally
		From 466 interior axial pillars retain square bases
	467-477	High square bases, generally to be painted, with complex designs above
		From 469 carved dwarfs on corners of bases; until 471 some only painted
	464-471	Capitals' brackets show consistent reduction of number of volutes
	464-471	in 465: 6 volutes; 466: 5 volutes; 467: 4 volutes;
	475-478	after Hiatus: 3 volutes; but plain undersurfaces conventional
	467-477	Plain capital undersurfaces preferred, to facilitate painting
Pilasters	464-469	Generally plain flat shafts, sometimes simple linear decoration
	469-477	Medallions conventional now; complexity develops consistently
Main Doorways	463-466	Plain jambs, painted; Cave L6 has set-in goddesses on monolithic makaras
	467-469	Goddesses on yaksa-supported pilasters, with hand on upraised makara tail
	469-478	Decoration more complex, later influenced by Cave 1 shrine doorway.
		Panels w/loving couples on top and sides increasingly complex
	477-478	Goddesses displaced to allow trabeated composition; increasing focus.
Windows	463	Square with notches for frame (anomalous: Cave L6) Shuttered outside
	464-471	Higher than wide. Shuttered from outside; No carved decoration.
	475-477	Square. Carved decoration outside. Shutters efficiently inside.
	475-477	Unfinished rectangular windows converted to decorated square types.
Cell doorway front	463-468	Cell doorways simple; no outer or inner recesses.
	469 –478	From 469 cell doorways always have front recess; never before.
	475-477	Deep inner recess cut for newly developed D mode doorways
Candrasilas (for cells)	464-467	Commonly placed in front of cell doorways
	467-469	Plain steps or rises often used; candrasilas rarely
	471-478	Steps generally omitted; cell door-sills typically low.
Cell door fittings	462 467	A mode: plain door openings; no fittings included
	468-471	A+ mode mimics B (and sometimes C) mode with attached projection
	468-469	B mode: monolithic projection for upper pivot; lower cut in floor below
		(First found in Caitya Cave 26 main doorway in c. 465; impact delayed)
	470-471	C mode: monolithic projection above and below to contain pivots
	475-477	D mode: simple inner recess at rear into which door pivots fit
		(First found in Caitya Cave 19 in 471; impact delayed)
	478-479	E mode: expedient variation of D-mode with adjustable upper pivot
	479-480	F mode a few clumsy door-fittings built up of mud-plaster
Niches in Cells	471-476	Generally cut in cell's rear wall; but in Cave 19 put where light best
	477-478	Larger niches (called "shelves") occasionally used
Shrine Development	462-465	Shrines not yet conceived; no axial focus in caves
	466-468	Stupas intended for shrines; started only in Cave 11 and L6(?)
	469-478	Buddhas in shrines, influenced by Cave 19, 26 conceptions.
		Axial focus invariable now; central intercolumniations widened
	469 (early)	Buddhas created and dedicated in viharas Lower 6, 7, 11, 15
	469-470	Buddha image finished in Caitya Cave 19 (dedicated 471)
	471	Buddhas dedicated in Caves 17 and 20
	476-477	Buddha carved in Cave 1 (never dedicated)
	477-478	Buddha (intended in 468) carved in Caitya Cave 26. Dedicated 478
	478 (early)	Buddhas dedicated in 2, 4, Upper 6, 7 (redone), 11 (redone), 15, 16.
	478 (late)	Buddha images dedicated in 21, 26 Left Wing, 26 Right Wing
Buddha images	469-476	Shrine Buddhas invariably planned for padmasana
	477-478	Shrine Buddhas invariably bhadrasana (unless begun earlier)
	Mid 478-480	Buddhas in intrusive shrines now favor bhadrasana pose.
	469-479	For varying throneside, thronebase, attendants, etc., see Chart: "Development of Iconographic Features at Ajanta…"

227 *Spink's 'Defining Features for the Vakataka phase of Ajanta'; source: Spink, Ajanta: History and Development, vol. 4 (Brill: 2005), fig. 40.*

Sunrise and sunset in Jalgaon

Africa | North America | South America | Asia | Australia/Pacific | Europe

Time/General | Weather | Time zone | DST | Sun & Moon

Jalgaon, Maharashtra, India

Modify parameters

Show full month: June **Year:** 2011 **Body:** Sun **Columns:** rise/set time/azimuth Show

Change location

Rising and setting times for the Sun

			Azimuth		Length of day	
Date	**Sunrise**	**Sunset**	**Sunrise**	**Sunset**	**This day**	**Difference**
1 Jun 2011	05:46	19:05	66°	294°	13h 19m 21s	+ 31s
2 Jun 2011	05:46	19:06	66°	294°	13h 19m 51s	+ 29s
3 Jun 2011	05:46	19:06	66°	294°	13h 20m 20s	+ 28s
4 Jun 2011	05:46	19:06	66°	294°	13h 20m 47s	+ 27s
5 Jun 2011	05:46	19:07	65°	295°	13h 21m 13s	+ 25s
6 Jun 2011	05:46	19:07	65°	295°	13h 21m 37s	+ 24s
7 Jun 2011	05:46	19:08	65°	295°	13h 22m 00s	+ 22s
8 Jun 2011	05:46	19:08	65°	295°	13h 22m 22s	+ 21s
9 Jun 2011	05:46	19:08	65°	295°	13h 22m 41s	+ 19s
10 Jun 2011	05:46	19:09	65°	295°	13h 23m 00s	+ 18s
11 Jun 2011	05:46	19:09	65°	295°	13h 23m 17s	+ 16s
12 Jun 2011	05:46	19:09	65°	295°	13h 23m 32s	+ 15s
13 Jun 2011	05:46	19:10	65°	295°	13h 23m 46s	+ 13s
14 Jun 2011	05:46	19:10	65°	295°	13h 23m 59s	+ 12s
15 Jun 2011	05:46	19:10	65°	295°	13h 24m 09s	+ 10s
16 Jun 2011	05:46	19:11	65°	295°	13h 24m 19s	+ 09s
17 Jun 2011	05:46	19:11	65°	296°	13h 24m 26s	+ 07s
18 Jun 2011	05:46	19:11	64°	296°	13h 24m 33s	+ 06s
19 Jun 2011	05:47	19:11	64°	296°	13h 24m 37s	+ 04s
20 Jun 2011	05:47	19:12	64°	296°	13h 24m 40s	+ 03s
21 Jun 2011	05:47	19:12	64°	296°	13h 24m 42s	+ 01s
22 Jun 2011	05:47	19:12	64°	296°	13h 24m 41s	< 1s
23 Jun 2011	05:47	19:12	64°	296°	13h 24m 40s	− 01s
24 Jun 2011	05:48	19:12	64°	296°	13h 24m 37s	− 03s
25 Jun 2011	05:48	19:13	64°	296°	13h 24m 32s	− 04s
26 Jun 2011	05:48	19:13	64°	295°	13h 24m 25s	− 06s
27 Jun 2011	05:49	19:13	65°	295°	13h 24m 17s	− 07s
28 Jun 2011	05:49	19:13	65°	295°	13h 24m 08s	− 09s
29 Jun 2011	05:49	19:13	65°	295°	13h 23m 57s	− 11s
30 Jun 2011	05:49	19:13	65°	295°	13h 23m 44s	− 12s

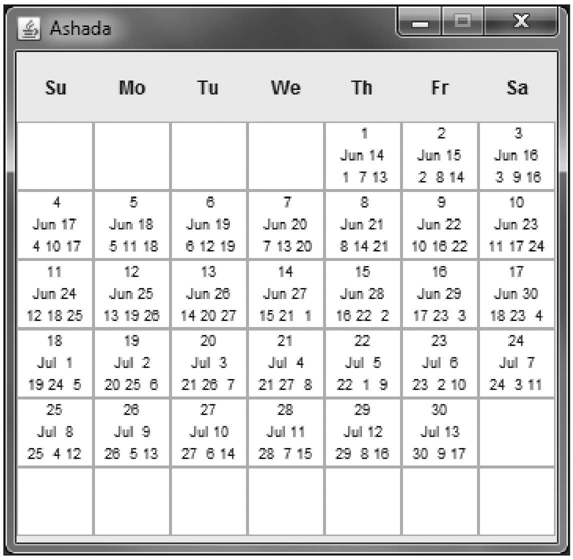
All times are in local time for Jalgaon

June Solstice (Summer Solstice) is on Tuesday, 21 June 2011, 22:46 in Jalgaon. In most locations north of Equator, the longest day of the year is around this date

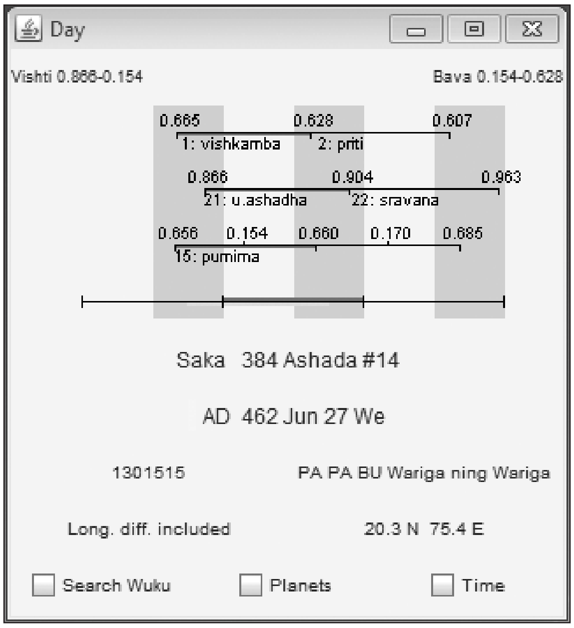
About the Sun Calculator

228 *Month calendar showing the sunrise angles at Jalgaon (60 km from Ajanta) in June. From 1 June to 30 June the angle changes up to 2°. (Source: Time and Date.com, www.timeanddate.com/worldclock/astronomy.html?n=1664&month=6&year=2012&obj=sun&afl=-12&day=1; accessed on 25 January 2012)*

229 *Year calendar of 384 Saka Era or 462 CE. Asadha masa spanned from 19 May to 13 June of Julian Era. The month in red indicates the first month. Clicking on the month button of the calculator returns the calendar of that month in a new screen (fig. 230). (Source: L. Gislen & J. C. Eade, Suryasiddhanta HIC 1.0, computer application)*



230 *Month calendar of Asadha 384 Saka Era. Clicking on 14 Asadha returns the calendar of that day in a new screen (fig. 231).*



231 *Day calendar of 14 Asadha showing the various divisions and units of the day relating to the coordinates of Ajanta (20.33N-75.41E). It shows the month-end of Asadha and beginning of Sravana masa. The hour of the end of purnima (full moon) is also seen.*

Phases of the Moon: 461 to 465

Universal Time (UT)

Year	New Moon	First Quarter	Full Moon	Last Quarter	ΔT
461		Jan 5 21:53	Jan 12 14:12	Jan 19 11:24	01h41m
	Jan 27 15:48	Feb 4 09:50	Feb 11 00:20	Feb 18 04:58	
	Feb 26 08:55	Mar 5 18:10	Mar 12 10:43 n	Mar 19 23:29	
	Mar 27 23:18 A	Apr 4 00:01	Apr 10 21:43 n	Apr 18 17:48	
	Apr 26 10:39	May 3 04:51	May 10 09:38	May 18 11:01	
	May 25 19:26	Jun 1 10:14	Jun 8 22:43	Jun 17 02:27	
	Jun 24 02:38	Jun 30 17:28	Jul 8 13:09	Jul 16 15:35	
	Jul 23 09:30	Jul 30 03:35	Aug 7 04:51	Aug 15 02:23	
	Aug 21 17:13	Aug 28 17:12	Sep 5 21:19 n	Sep 13 11:14	
	Sep 20 02:42 T	Sep 27 10:28	Oct 5 13:33	Oct 12 18:59	
	Oct 19 14:27	Oct 27 06:52	Nov 4 04:37	Nov 11 02:38	
	Nov 18 04:36	Nov 26 04:49	Dec 3 18:00	Dec 10 11:11	
	Dec 17 21:01	Dec 26 01:58			

Year	New Moon	First Quarter	Full Moon	Last Quarter	ΔT
462			Jan 2 05:47	Jan 8 21:18	01h41m
	Jan 16 15:07	Jan 24 20:04	Jan 31 16:18	Feb 7 09:18	
	Feb 15 09:49	Feb 23 09:57	Mar 2 01:52 p	Mar 8 23:11	
	Mar 17 03:32 A	Mar 24 19:47	Mar 31 10:49	Apr 7 14:48	
	Apr 15 18:52	Apr 23 02:32	Apr 29 19:37	May 7 07:44	
	May 15 07:20	May 22 07:31	May 29 05:04	Jun 6 01:14	
	Jun 13 17:22	Jun 20 12:05	Jun 27 16:08	Jul 5 18:19	
	Jul 13 01:56	Jul 19 17:37	Jul 27 05:35	Aug 4 10:07	
	Aug 11 10:06	Aug 18 01:24	Aug 25 21:35 p	Sep 3 00:08	
	Sep 9 18:41 T	Sep 16 12:39	Sep 24 15:21	Oct 2 12:18	
	Oct 9 04:12	Oct 16 04:06	Oct 24 09:28	Oct 31 22:48	
	Nov 7 15:02	Nov 14 23:35	Nov 23 02:34	Nov 30 07:55	
	Dec 7 03:33	Dec 14 21:31	Dec 22 17:53	Dec 29 16:09	

Year	New Moon	First Quarter	Full Moon	Last Quarter	ΔT
463	Jan 5 18:01	Jan 13 19:25	Jan 21 07:07	Jan 28 00:15	01h41m
	Feb 4 10:17 P	Feb 12 15:01	Feb 19 18:15 t	Feb 26 09:04	
	Mar 6 03:32	Mar 14 07:00	Mar 21 03:25	Mar 27 19:27	
	Apr 4 20:28	Apr 12 19:09	Apr 19 11:08	Apr 26 07:56	
	May 4 12:01	May 12 03:51	May 18 18:18	May 25 22:36	
	Jun 3 01:46	Jun 10 09:58	Jun 17 02:07	Jun 24 15:02	
	Jul 2 13:51	Jul 9 14:42	Jul 16 11:45	Jul 24 08:34	
	Aug 1 00:41 P	Aug 7 19:27	Aug 15 00:07 t	Aug 23 02:24	
	Aug 30 10:43 P	Sep 6 01:50	Sep 13 15:25	Sep 21 19:45	
	Sep 28 20:23	Oct 5 11:18	Oct 13 09:07	Oct 21 11:43	
	Oct 28 06:10	Nov 4 00:45	Nov 12 04:06	Nov 20 01:25	
	Nov 26 16:36	Dec 3 18:08	Dec 11 23:00	Dec 19 12:23	
	Dec 26 04:07				

232 *Moon phases from 461 to 463 CE. Note that 27 June 27, 462 CE is a purnima (full moon). (Source: 'Moon Phase Predictions by Fred Espenak, NASA/GSFC', NASA Eclipse Website, www.eclipse.gsfc.nasa.gov./phase/phase0401.html; accessed on 25 January 2012)*

Moon phases for Jalgaon, India - Maharashtra

Important

Local time history for years before 1970 is not available for Jalgaon.
Instead, local time for Kolkata is used for years before 1970.

◀ 461 | year 462 | 463 ▶

Lunation	New Moon		First Quarter		Full Moon		Third Quarter		Duration
-18070					2 Jan	11:30 AM	9 Jan	3:01 AM	29d 18h 07m
-18069	16 Jan	8:50 PM	25 Jan	1:47 AM	31 Jan	10:00 PM	7 Feb	3:01 PM	29d 18h 42m
-18068	15 Feb	3:32 PM	23 Feb	3:40 PM	2 Mar	7:34 AM	9 Mar	4:54 AM	29d 17h 42m
-18067	17 Mar	9:14 AM	25 Mar	1:30 AM	31 Mar	4:31 PM	7 Apr	8:30 PM	29d 15h 20m
-18066	16 Apr	12:35 AM	23 Apr	8:15 AM	30 Apr	1:19 AM	7 May	1:26 PM	29d 12h 28m
-18065	15 May	1:03 PM	22 May	1:13 PM	29 May	10:47 AM	6 Jun	6:57 AM	29d 10h 02m
-18064	13 Jun	11:04 PM	20 Jun	5:48 PM	27 Jun	9:51 PM	6 Jul	12:02 AM	29d 8h 34m
-18063	13 Jul	7:39 AM	19 Jul	11:19 PM	27 Jul	11:18 AM	4 Aug	3:50 PM	29d 8h 10m
-18062	11 Aug	3:48 PM	18 Aug	7:07 AM	26 Aug	3:17 AM	3 Sep	5:51 AM	29d 8h 35m
-18061	10 Sep	12:23 AM	16 Sep	6:22 PM	24 Sep	9:03 PM	2 Oct	6:01 PM	29d 9h 32m
-18060	9 Oct	9:55 AM	16 Oct	9:49 AM	24 Oct	3:10 PM	1 Nov	4:30 AM	29d 10h 50m
-18059	7 Nov	8:45 PM	15 Nov	5:17 AM	23 Nov	8:17 AM	30 Nov	1:38 PM	29d 12h 31m
-18058	7 Dec	9:16 AM	15 Dec	3:13 AM	22 Dec	11:35 PM	29 Dec	9:52 PM	29d 14h 28m

Notes

- About the Moon Phase Calculator
- All times are local mean solar time for Kolkata. (UTC +5:53:28 hours)
- Dates are based on the Julian calendar
- For years before 1700, the calculated times might be off by many minutes

233 *Full moon days in 462 CE at Jalgaon. Notice June 27, 462 CE as the date of full moon. (Source: Time and Date.com, www.timeanddate.com/calendar/moonphases/html?year=0462&n=1664; accessed on 25 January 2012)*

Calendar 462 (India)

January

Su	Mo	Tu	We	Th	Fr	Sa
	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30	31			

2:○ 9:◑ 16:● 25:◐ 31:○

February

Su	Mo	Tu	We	Th	Fr	Sa
				1	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28			

7:◑ 15:● 23:◐

March

Su	Mo	Tu	We	Th	Fr	Sa
				1	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	31

2:○ 9:◑ 17:● 25:◐ 31:○

April

Su	Mo	Tu	We	Th	Fr	Sa
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30					

7:◑ 16:● 23:◐ 30:○

May

Su	Mo	Tu	We	Th	Fr	Sa
		1	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28	29	30	31		

7:◑ 15:● 22:◐ 29:○

June

Su	Mo	Tu	We	Th	Fr	Sa
					1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30

6:◑ 13:● 20:◐ 27:○

July

Su	Mo	Tu	We	Th	Fr	Sa
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30	31				

6:◑ 13:● 19:◐ 27:○

August

Su	Mo	Tu	We	Th	Fr	Sa
			1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30	31	

4:◑ 11:● 18:◐ 26:○

September

Su	Mo	Tu	We	Th	Fr	Sa
						1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29
30						

3:◑ 10:● 16:◐ 24:○

October

Su	Mo	Tu	We	Th	Fr	Sa
	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30	31			

2:◑ 9:● 16:◐ 24:○

November

Su	Mo	Tu	We	Th	Fr	Sa
				1	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	

1:◑ 7:● 15:◐ 23:○ 30:◑

December

Su	Mo	Tu	We	Th	Fr	Sa
						1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29
30	31					

7:● 15:◐ 22:○ 29:◑

Calendar generated on www.timeanddate.com/calendar

234 *Year calendar of 462 CE, India also showing the moon phases of the year. Notice June 27, 462 CE as the date of full moon. (Source: Time and date.com, www.timeanddate.com/calendar/?year=462&country=35; accessed on 25 January 2012)*

Calendar June 462 (India)

June

Sun	Mon	Tue	Wed	Thu	Fri	Sat
					1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30

Phases of the moon: 6:◑ 13:● 20:◐ 27:○

Calendar generated on www.timeanddate.com/calendar

235 *Month calendar, June 462 CE, India showing the moon phases. Notice June 27 as the date of full moon. (Source: Time and Date.com, www.timeanddate.com/calendar/custom.html?year=462&month=6&country=35&df=1; accessed on 25 January 2012)*