

Rock Cut Architecture During Harappan Civilization

Dholavira is an [archaeological site](#) in [Kutch District](#), in the state of [Gujarat](#) in [western India](#), which has taken its name from a modern-day village 1 kilometre (0.62 mi) south of it. This village is 165 km (103 mi) from [Radhanpur](#). Also known locally as *Kotada timba*, the site contains ruins of an ancient [Indus Valley Civilization](#)/Harappan city. It is one of the five largest Harappan sites and most prominent archaeological sites in India belonging to the Indus Valley Civilization. It is also considered as having been the grandest of cities of its time. It is located on *Khadir bet* island in the [Kutch Desert Wildlife Sanctuary](#) in the [Great Rann of Kutch](#). The quadrangular city lay between two seasonal streams, the Mansar in the north and Manhar in the south. The site was occupied from c.2650 BCE, declining slowly after about 2100 BCE. It was briefly abandoned then reoccupied until c.1450 BCE.

The site was discovered in 1967-68 by [J. P. Joshi](#), of the [Archaeological Survey of India](#) (ASI), and is the fifth largest of eight major Harappan sites. It has been under excavation since 1990 by the ASI, which opined that Dholavira has indeed added new dimensions to personality of Indus Valley Civilisation. The other major Harappan sites discovered so far are [Harappa](#), [Mohenjo-daro](#), [Ganeriwala](#), [Rakhigarhi](#), [Kalibangan](#), [Rupnagar](#) and [Lothal](#).

Reservoirs:

R S Bisht, who retired as the Joint Director-General of the ASI, said, "The kind of efficient system of Harappans of Dholavira, developed for conservation, harvesting and storage of water speaks eloquently about their advanced hydraulic engineering, given the state of technology in the third millennium BCE." One of the unique features of Dholavira is the sophisticated water conservation system of channels and reservoirs, the earliest found anywhere in the world, built completely of stone. The city had massive reservoirs, three of which are exposed. They were used for storing fresh water brought by rains or to store water diverted from two nearby rivulets. This clearly came in response to the desert climate and conditions of Kutch, where several years may pass without rainfall. A seasonal stream which runs in a north-south direction near the site was dammed at several points to collect water. In 1998, another reservoir was discovered in the site.

The inhabitants of Dholavira created sixteen or more reservoirs of varying size during Stage III. Some of these took advantage of the slope of the ground within the large settlement, a drop of 13 metres (43 ft) from northeast to northwest. Other reservoirs were excavated, some into [living rock](#). Recent work has revealed two large reservoirs, one to the east of the castle and one to its south, near the Annexe. The reservoirs are cut through stone vertically, and are about 7 m (23 ft) deep and 79 m (259 ft) long. They skirt the city, while the citadel and bath are centrally located on raised ground. There is also a large well with a stone-cut through connecting it to a drain meant for conducting water to a storage tank. The bathing tank had steps descending inwards.

In October 2014, excavation began on a rectangular [stepwell](#) which measured 73.4 m (241 ft) long, 29.3 m (96 ft) wide, and 10 m (33 ft) deep, making it three times bigger than the [Great Bath of Mohenjo-daro](#).

Mauryan Caves

Barabar Caves

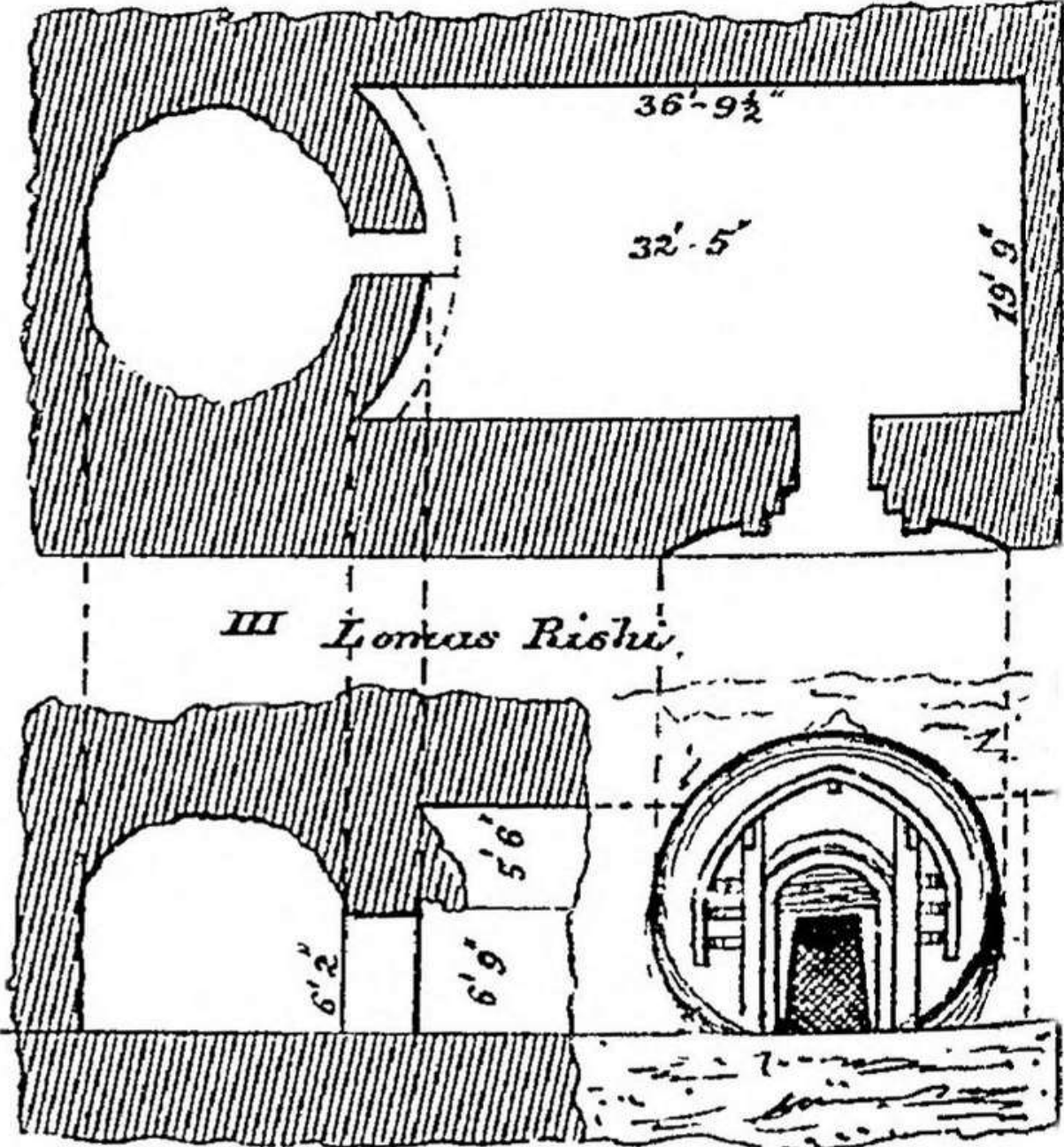
- * Lomas Rishi Cave
- * Sudama Cave
- * Karan Chaupar Cave
- * Visvakarma Cave

Nagarjuni Cave

- * Gopi Cave
- * Vadithika Cave
- * Vapiyaka Cave

Lomas Rishi cave has an arch-like shape facade that imitates contemporary timber architecture. On the doorway, a row of elephants proceed towards stupa emblems, along the curved architrave.

*Lomas
Rishi
Cave*



Lomas Rishi cave:

The arch-like shape facade of Lomas Rishi Caves, imitate the contemporary timber architecture. On the doorway, a row of elephants proceed towards stupa emblems, along the curved architecture.







Lomas Rishi Caves, Barabar Hills, 3rd C. BC

Lomas Rishi is impressive because its entrance is carved as a faithful imitation of a wooden building with a free standing barrel roof supported on posts and beams. Among its various wooden details are three smooth curved bands. The space between the upper 2 bands is filled by a lattice screen to admit light and air. The lower space has been magnificently carved with a procession of elephants.



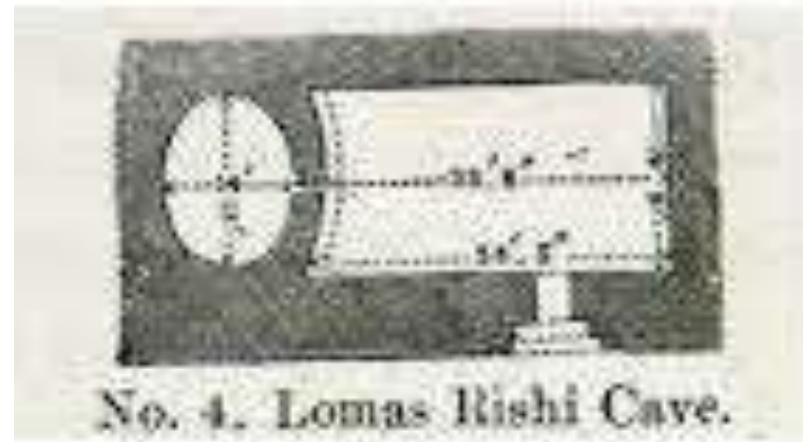


*Plan of
Lomas Rishi*

*Assembly Hall
32'9"x19'9"x12'3"*

*and
Sudama
Cave*

*Assembly Hall
32'9"x19'6"x12'3"*



No. 4. Lomas Rishi Cave.



No. 5. Sudama Cave.

Sudama cave was dedicated by Mauryan Emperor, Ashoka in 261 BCE. The arches of Sudama cave have bow shape. The caves consist of a circular vaulted chamber with a rectangular mandapa.

Façade of Sudama Cave





Karan Chaupar (Karna Chaupar) consists of single rectangular room with polished surfaces, contains inscription which could be dated to 245 BCE.

Karan Chaupar, also known as Karna Chaupar, is on the northern side of the Barabar granite hill. It consists of a single rectangular room with polished surfaces, 10.2x4.27m in dimensions. It contains an inscription of Ashoka dating from the 19th year of his reign, about 250 BCE, located outside, immediately to the right of the entrance.

Visva karma cave, reachable by *Ashoka steps* hewn in the cliff, consists of two rectangular rooms. The Visvakarma cave, also called Viswa Mitra, is accessible by the "steps of Ashoka" carved into the cliff. It is a hundred meters and a little east of the main granite hill. It consists of a rectangular room entirely open to the outside, a sort of elongated porch, and an unfinished semi-hemispherical room: the rectangular space measures 4.27x2.54m, and the circular room is 2.8m in diameter . One goes from the rectangular room to the half-hemispherical room by a narrow trapezoidal passage. On the floor of the porch, four holes were made, which are thought to allow the cave to be closed with a wooden picket fence. The cave of Visvakarma was offered by Ashoka to the Ajivikas in the year 12 of his reign, about 261 BCE.

Nagarjuni Cave

The nearby caves of Nagarjuni hill were built few decades later than the Barabar caves, and consecrated by Dasaratha Maurya, Ashoka's grandson and successor, each for the Ajivikas sect. They are 1.6 kilometers east of the Barabar Caves. The three caves are: **Gopi (Gopi-ka-Kubha), on the southside of the hill, excavated by the king Dasharatha grandson of Ashoka, according to an inscription. (44'x19'x10')**

Vadithika cave, on the north side of the hill, located in a crevice, and devoted to Ajivika followers by Dasharatha (c 232 BCE-224 BCE).

Vapiyaka cave, on the north side of the hill, also devoted to Ajivika followers by Dasharatha.

Udayagiri and Khandagiri Caves are partly natural and partly artificial caves of archaeological, historical and religious importance near the city of [Bhubaneswar](#) in [Odisha, India](#). The caves are situated on two adjacent hills, Udayagiri and Khandagiri, mentioned as *Kumari Parvata* in the [Hathigumpha inscription](#). They have a number of finely and ornately carved caves built during 2nd century BCE. It is believed that most of these caves were carved out as residential blocks for [Jaina](#) monks during the reign of King [Kharavela](#). Udayagiri means "Sunrise Hill" and has 19 caves while Khandagiri has 16 caves.



1. Rani Gumpha "Cave of the Queen"

Rani Gumpha is the largest and most popular cave among the caves of Udayagiri and Khandagiri. This cave is double storeyed. The lower floor has seven entrances in the middle wing whereas the upper floor has nine columns.



First Floor, Rani Gumpha



Ground Floor, Rani Gumpha



01, Corridor



01, Pillar Relief with Elephants



2. Vajradhara Gumph

Vajradhara Gumph is very simple and small. It has stone bed and pillow and it was obviously used as the Jain monks' shelter in the ancient times. Apart from the plain rectangular shaped pillars, there is no other sculpture found in this cave.

3. Chota Hathi Gumph

Chota Hathi Gumph is small in size. It has six small elephant figures in the facade. The word 'chota hathi' means 'small elephant'.

4. Alakapuri or Swargapuri Gumph

Alakapuri Gumph has a relief sculpture of a lion holding its prey in its mouth. The pillars with the human figures (divine beings) with wings are found in this cave. It is also double storeyed.

5. Jaya Vijaya Gumph

Jaya Vijaya Gumph is double storeyed. It has a relief image of Bodhi tree with umbrella on its top and flanked by people worshipping it.

6. Panasa Gumpha

Panasa Gumpha is very small and simple cave without any significant features.

7. Thakurani Gumpha

Thakurani Gumpha is double storeyd but is very simple in style. It has few tiny relief sculptures.

8. Patalapuri Gumpha

Patalapuri Gumpha is slightly bigger with a pillared verandah. However, there is no notable feature in this cave.

9. Manchapuri Gumpha

Manchapuri Gumpha is double storeyed. It has a damaged Jain religious symbol which was probably used for worship.

There are three inscriptions found in this cave. One inscription talks about the chief queen of Kharavela.

10.

Ganesha

Gumpha

Ganesha Gumpha is one of the most important caves in Udayagiri. The cave got this name due to carved figure of Ganesha on the back of its right cell. Of course, it would have been carved in the later period and it cannot be the original work. The cave has two big statues of elephants carrying garlands at the entrance. The carvings in this cave narrate the story of the elopement of Vasavadatta, Princess of Ujjayayini, with King Udayana of Kausambi.

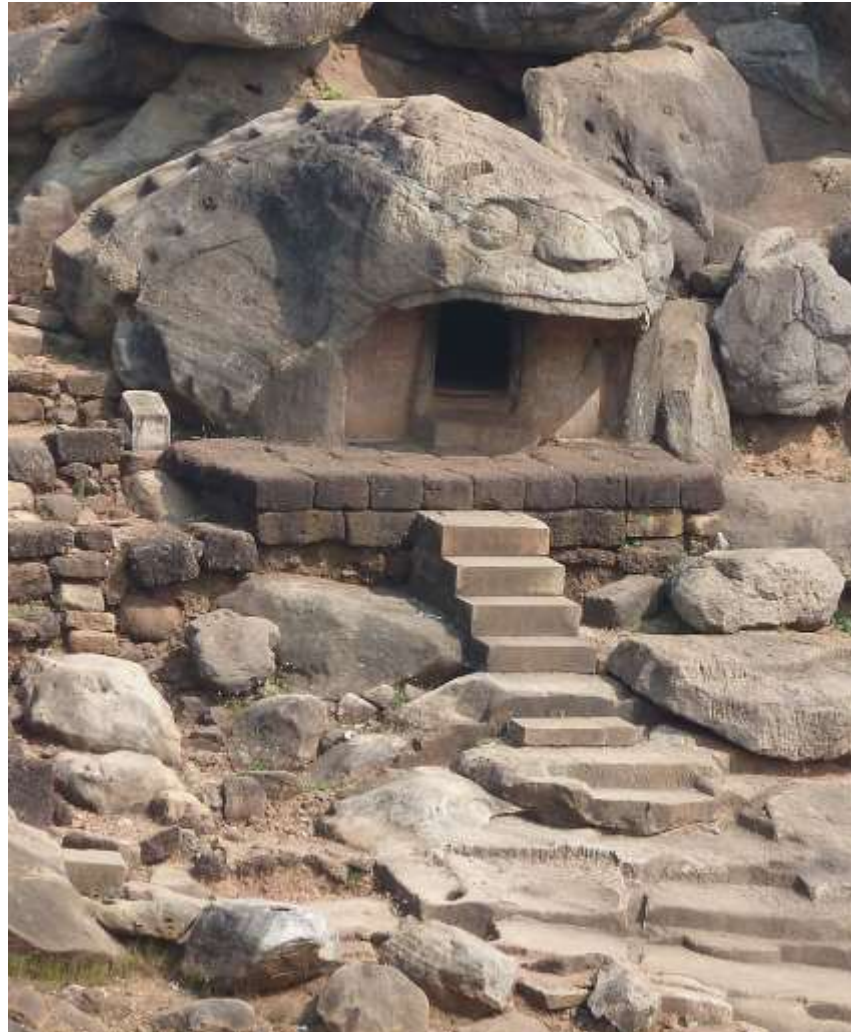


11. Jambesvara Gumpha

Jambesvara Gumpha is a very simple and small cave with one column and two pilasters. The inscription tells that it is the cave of Nayaki, wife of Mahamade.

12. Vyaghra Gumpha

Vyaghra Gumpha is one of the popular caves in Udayagiri. The cave, which is in ruins, has the entrance carves like a large mouth of a tiger. The inscription found here tells that this cave belongs to the city judge Sabhuti.



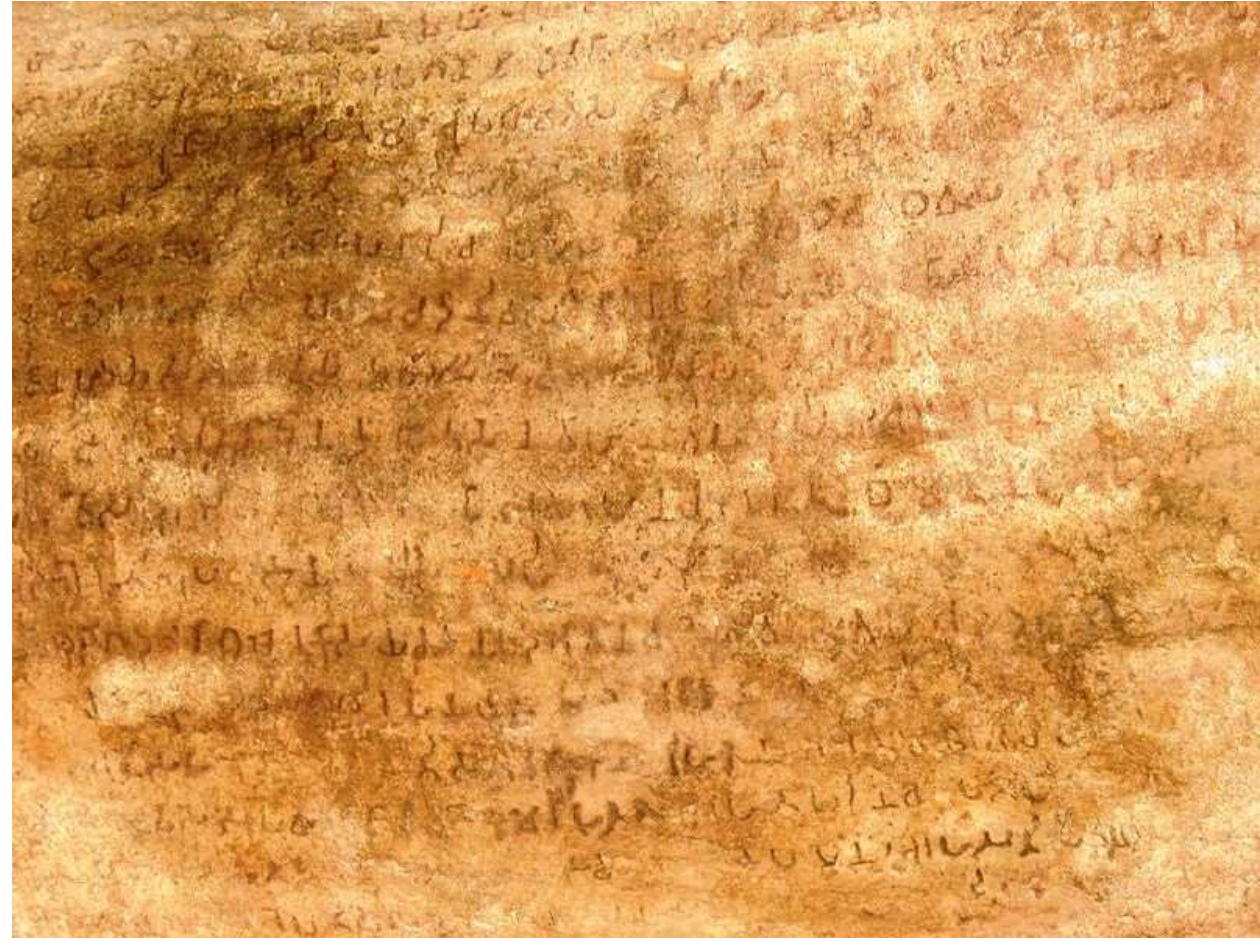
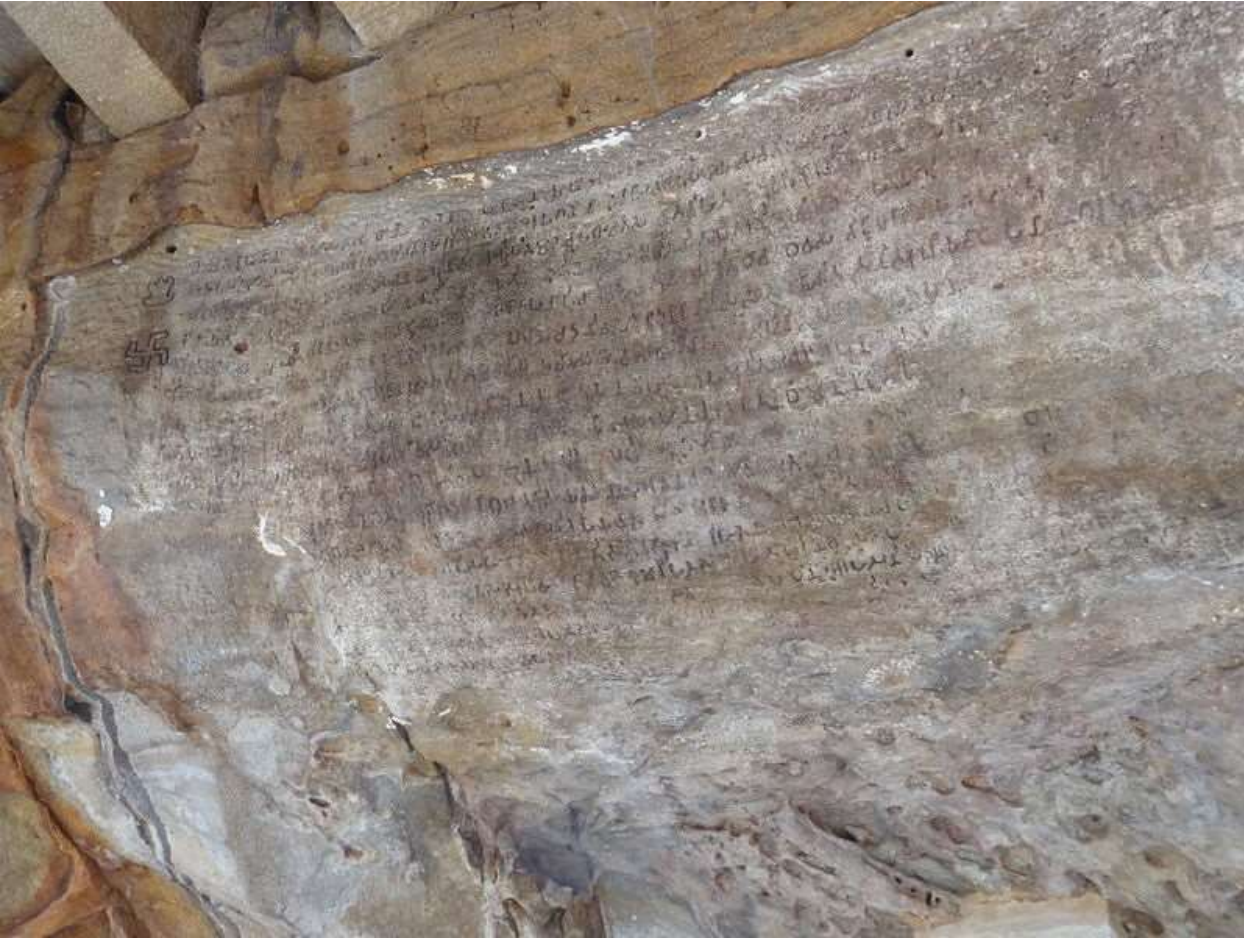
13. Sarpa Gumpha

Sarpa Gumpha is unusually very small cave. There are two inscriptions found in this cave. The word 'sarpa' means snake.

14. Hathi Gumpha

Hathi Gumpha is a natural cavern. On the wall, the inscription erected by Kharavela is found. It is the main source of history of Kharavela.





15. Dhanaghara Gumph

Dhanaghara Gumph is a small cave which has two wide pillars and dwara pala sculptures carved at the entrance.

16. Haridasa Gumph

Haridasa Gumph is a small cave with three entrances and a verandah in the front side. There is an inscription found here.

17. Jagannatha Gumph

Jagannatha Gumph is roughly cut cave with three entrances.

18. Rasui Gumph

Rasui Gumph is unusually very small cave.

19. Vaikunthapur Gumph

It is also very small cave.

Caves of Khandagiri:

There are 15 caves in Khandagiri.

1. Tatowa Gumpha-1

The parrots are carved above the entrance arch and hence it is called as Tatowa Gumpha. It has two dwarapala figures too.

2. Tatowa Gumpha-2

The cave sharing the same name with the first cave has a veranda with pilasters containing exquisite carvings.

3. Ananta Gumpha

The cave has sculptures of women, elephants, geese (कँळ्हंस), etc.

4. Tentuli Gumpha

It is a small rock cut chamber with just one column.

5. Khandagiri Gumpha

It is a roughly cut cell and has double storeyed.

6. Dhyana Gumpha

It is a roughly cut cell.

7. Navamuni Gumpha

Navamuni Gumpha is a roughly cut cell with the sculptures of nine Jain Tirthankaras and Sasana Devis (Twelve armed deity).

8. Barabhuji Gumpha

Barabhuji Gumpha has two relief images of twelve armed Sasana Devis, hence it is called as Barabhuji (meaning twelve armed) Gumpha. There are few Tirthankara sculptures also found in this cave. The Sasana Devis are worshiped as Hindu deity Durga nowadays. The priests in this shrine claim some Jain Tirthankara sculpture as Surya.

9. Trusula Gumpha

Trusula Gumpha appears to be reconverted in the medieval times. There are three sculptures of Rishabha Deva who is found in the standing posture and look beautiful. Apart from these sculptures there are sculptures of 24 Jain Tirthankaras which look rough.

10. Ambika Gumpha

Few relief images of Sasana Devis are found here.

11. Lalatendu Keshari Gumpha

The relief images of Mahavira, Parshvanatha and few Jaina Tirthankaras are found here.

Caves 12, 13, 15 and 16 are unnamed.

Cave 14 is very simple and called as Ekadasi Gumpha.

ROCK CUT CAVES OF WESTERN INDIA

There are more than 1,500 known rock cut structures in India, out of which about 1000 were made by Buddhists (mainly between 200 BCE and 600 CE), 300 by Hindus (from 600 CE to 1200 CE), and 200 by Jains (from 900 CE to 1200 CE). In India, caves have long been regarded as places of sanctity. The oldest rock-cut CAVES in India is found in the Barabar caves in Bihar built around the 3rd century BCE.

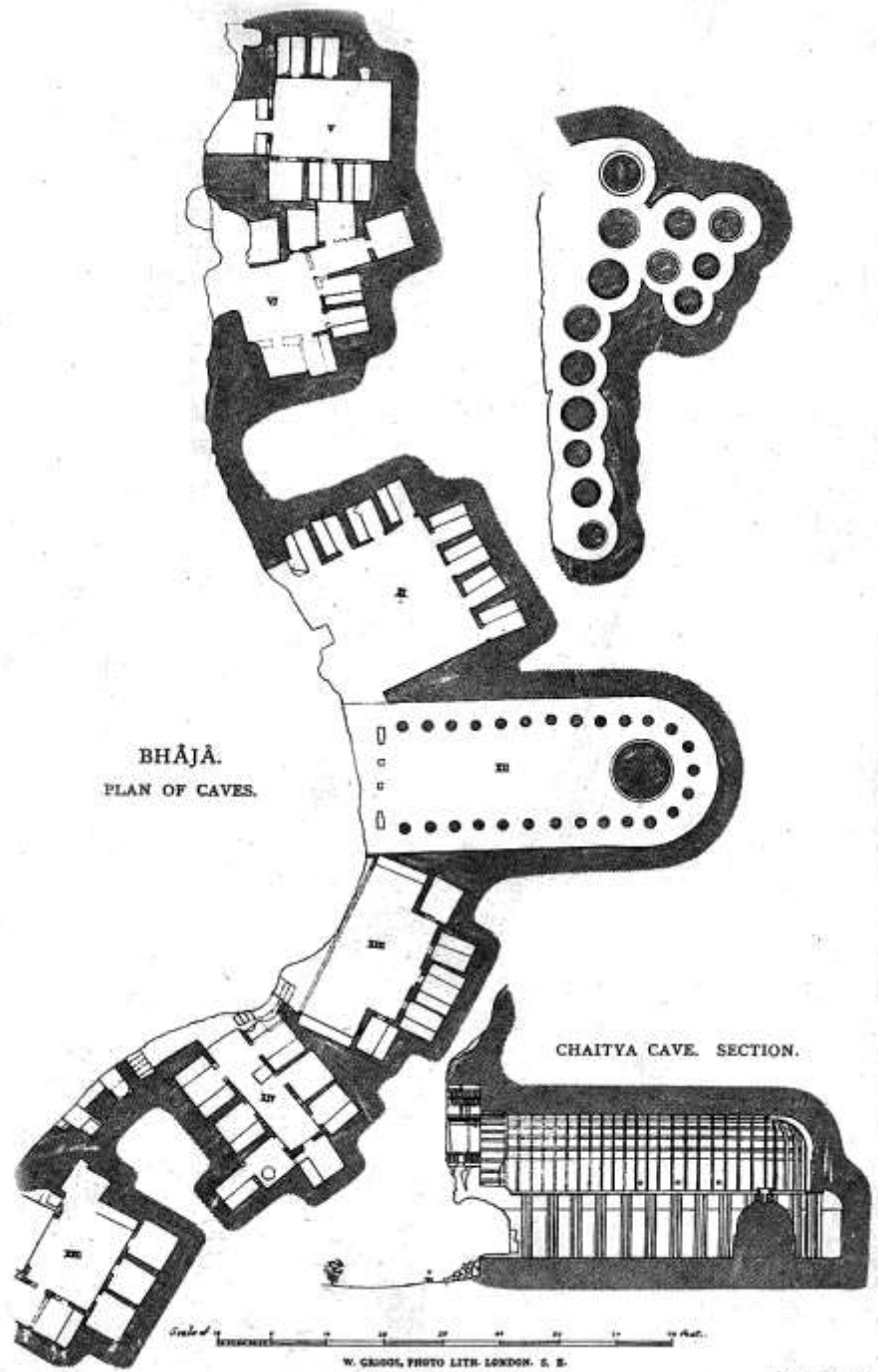
Probably owing to the 2nd century BCE fall of the Mauryan Empire and the subsequent persecutions of Buddhism under Pushyamitra Sunga, it is thought that many Buddhists relocated to the Deccan under the protection of the Satavahana dynasty, thus shifting the cave-building effort to western India: an enormous effort at creating religious caves (usually Buddhist or Jain) continued there until the 2nd century CE, culminating with the Karla caves or the Pandavleni caves.

These caves generally followed an apsidal plan with a stupa in the back for the chaityas, and a rectangular plan with surrounding cells for the viharas. The Indo-Scythian dynasty of the Western Kshatras too sponsored numerous Buddhist caves.

Several simple viharas, *chaityas* started to be cut in the rock, such as at Bhaja, Kondane, Pitalakhora, Ajanta, Bedsa, Nasik, Junnar, Karle and Kanheri which were occupied continuously by Buddhist monks from 200 BCE to 650 CE.

Bhaja Caves are a group of 22 rock-cut caves dating back to the 2nd century BCE located in Pune district, near Lonavala, Maharashtra. The caves are 400 feet above the village of Bhaja, on an important ancient trade route running from the Arabian Sea eastward into the Deccan Plateau (the division between North India and South India). It belongs to the Hinayana Buddhism sect in Maharashtra.

A notable part of the monument is a group of 14 stupas, five inside and nine outside an irregular excavation. The *stupas* are relics of resident monks, who died at Bhaja, and display an inscription with the names of three monks, Ampinika, Dhammagiri and Sanghdina.



Bhaja-Panaroma View



Wooden Ceiling in Chaityagriha







Façade of Chaitya

Out side Stupa



Bhaja-
Great Chaitya





Kondane

These Caves are located in the small village of Kondana, 33 km north of Lonavala and 16 km northwest of Karla Caves. This cave group has 16 Buddhist caves. The caves were excavated in first century B.C. The construction on wooden pattern is notable. Kondane group of caves, first brought to notice in the 19th century by Vishnu Sastri, and soon after visited by Mr. Law, the then collector of Thana. So much so indeed that it is now difficult to determine whether they or the caves at Bhaja Caves are the earliest. There are 4 caves.





Kondane Chaitya



Kondane Chaitya Dagoba (Stupa)





Veranda of Vihara



Interior of Vihara

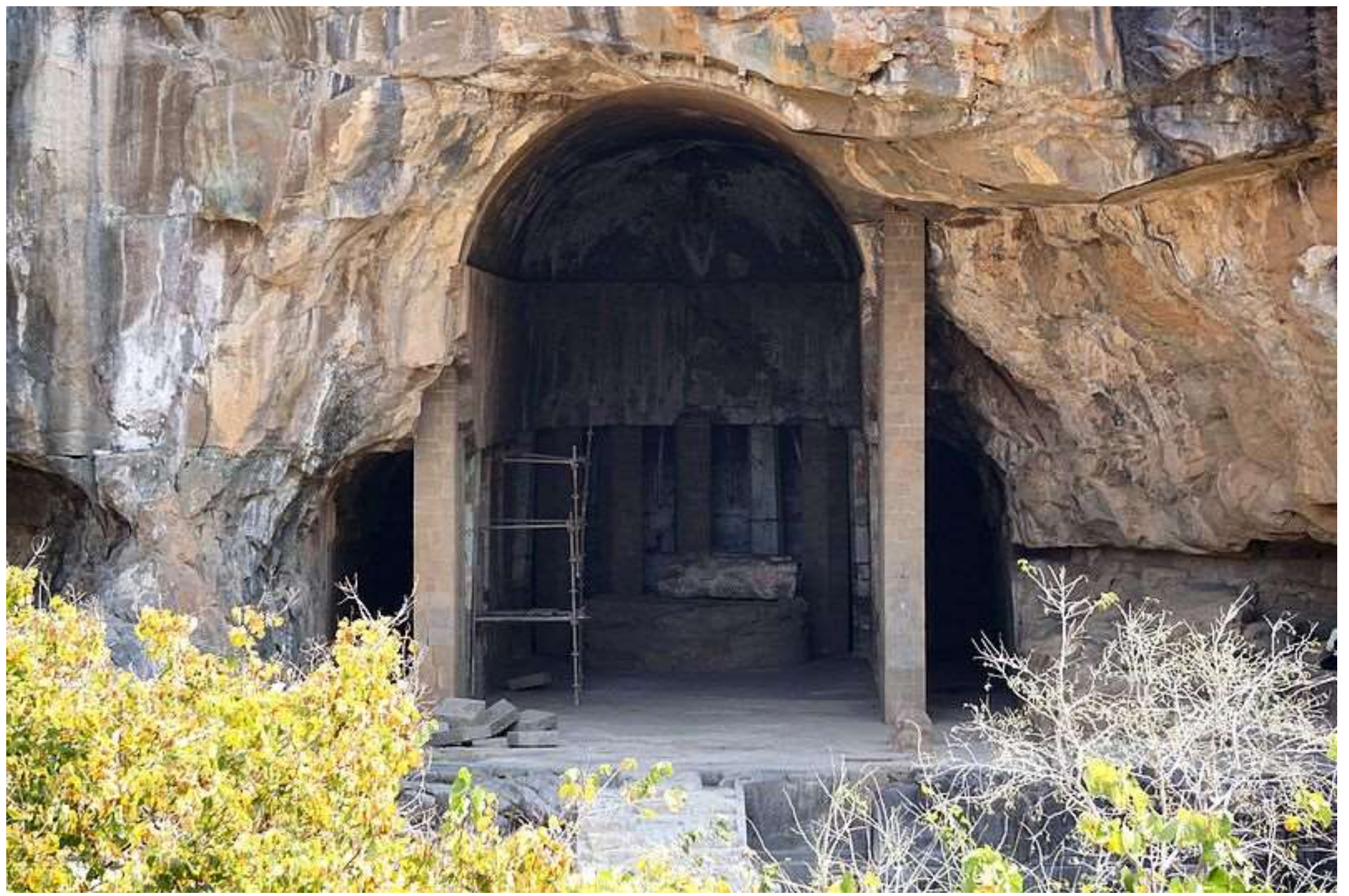
Pitalkhora

The Pitalkhora Caves, in the Shatamala range of the Western Ghats of Maharashtra, are an ancient Buddhist site consisting of 14 rock-cut cave monuments which date back to the second century BCE, making them one of the earliest examples of rock-cut architecture in India. These caves are located about 40 kilometers from Ellora and 70 kilometers from Aurangabad. The caves are cut in a variety of basalt rock, but some of the caves have crumbled and are damaged.

Out of the 13, five are chaityas (one housing votive *stupas*, one apsidal and single-cell) and the rest are viharas. Among 13 caves, 9 are one side and 4 are other side on the hillock. All the caves belong to the Hinayana period, but the reasonably well preserved paintings are of the Mahayana period. It is believed that Pitalkhora can be identified with Ptolemy's "Petrigala" as well as the "Pitangalya" of *Mahamayuri*, a Buddhist chronicle. The inscriptions date from c. 250 BCE to the 3rd and 4th centuries CE.

The *chaitya* hall, cave 3 of Pitalkhora, represents an important marker in the chronology of the *chaitya* hall design in western India. It measures 86 feet and 35 feet. There were 37 octagonal pillars but only 12 are remaining. The width of *pradikshnapath* was 4 feet 11 inches. Cave 4 is *vihara*. The entrance is 5 feet 4 inches high with 2 feet 6 inches width. Cave no. 5 – 9 are also *viharas*. Among these, cave 9 is largest. Cave no. 10 – 13 are *chaityas*. Cave no. 13 comprised circular *mandapa*. It measures 27'10"X15'X15'.







Ajanta

The Ajanta Caves are 29 rock-cut Buddhist cave monuments which date from the 2nd century BCE to about 650 CE. Of these 29 caves, 4 are *chaitya-griha* and 25 are *viharas*. Since 1983, the Ajanta Caves have been a UNESCO World Heritage Site. It is about 6 kilometres from Fardapur, 59 kilometres from the city of Jalgaon, Maharashtra, India, 104 kilometres from the city of Aurangabad, and 350 kilometres east-northeast from Mumbai. It is 100 kilometres from the Ellora Caves. On 28 April 1819, a British officer named John Smith, of the 28th Cavalry, while hunting tigers, "discovered" the entrance to Cave No. 10 when a local shepherd boy guided him to the location and the door. The caves are carved out of flood basalt rock of a cliff, part of the Deccan Traps formed by successive volcanic eruptions at the end of the Cretaceous geological period. The rock is layered horizontally, and somewhat variable in quality.

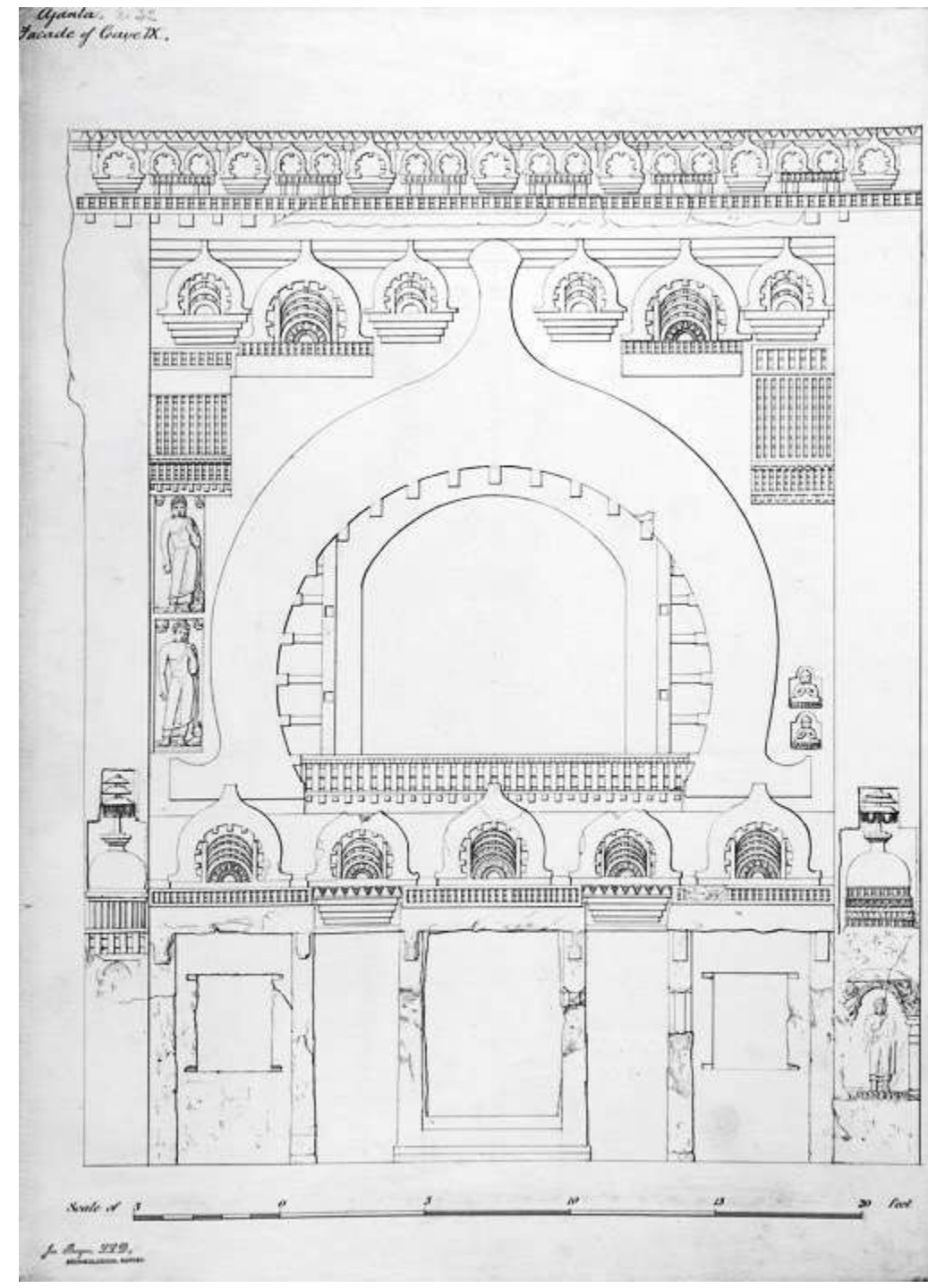
Ajanta Caves



28 27 **26** 25 24 23 22 21 20 **19** 18 17 16 15A 30 15 14 13 12 11 **10** **9** 8 7 6 5 4 3 2 1



Cave - 9



Cave - 10

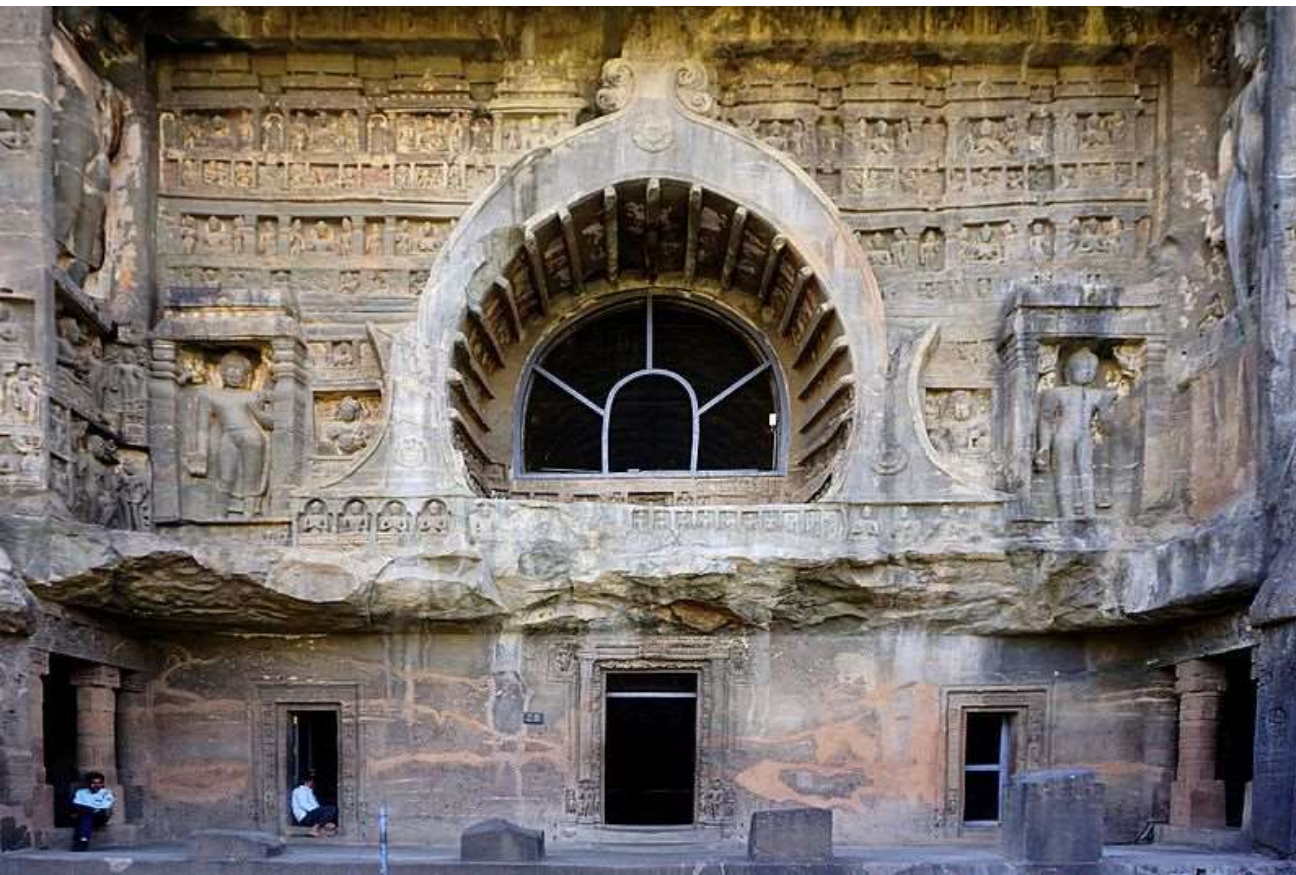




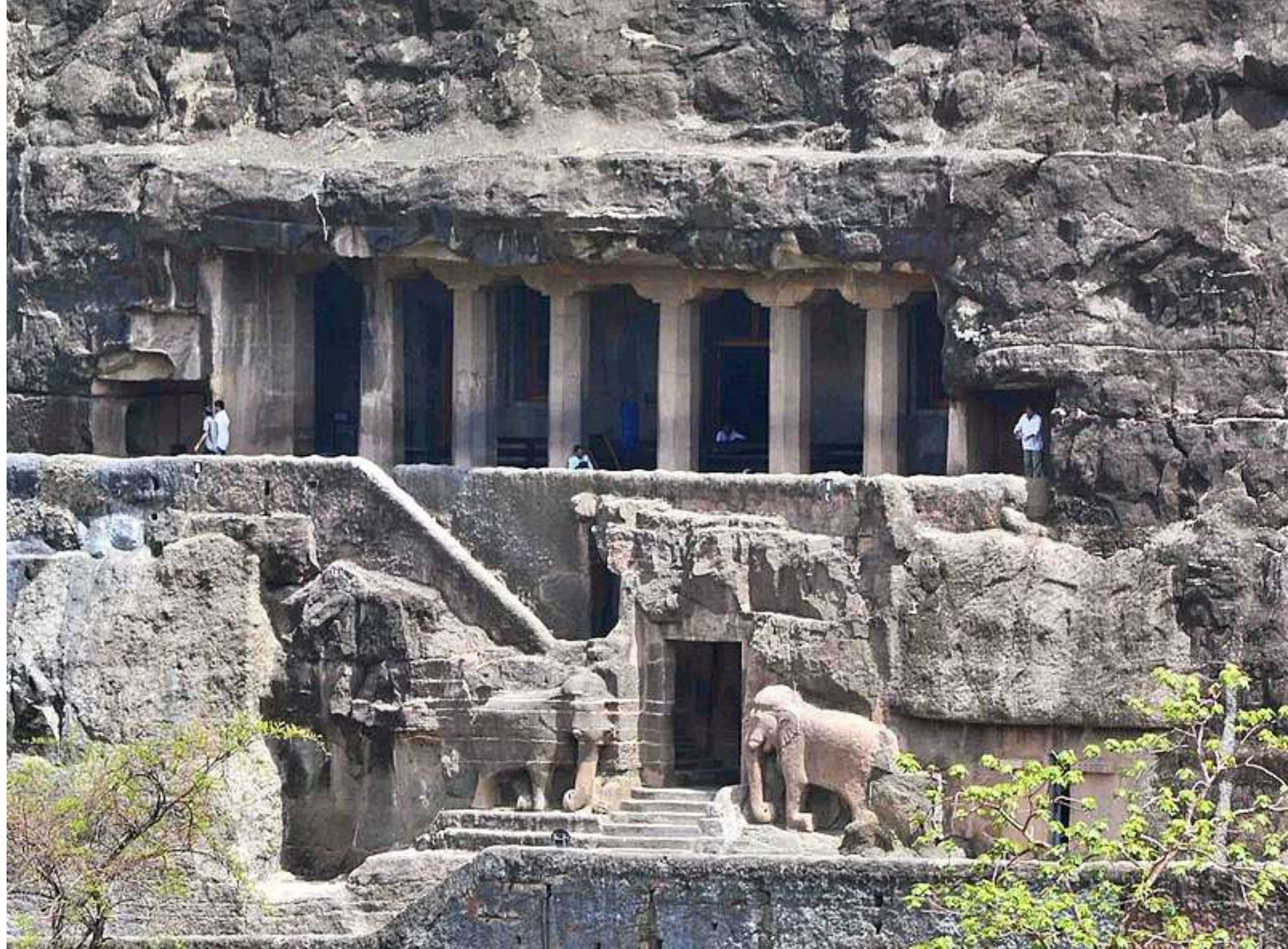
Cave - 19



Cave - 26



Cave - 16



Bedsa

These Caves also known as Bedse Caves are a group of Buddhist rock-cut monuments situated in Pune District of Maharashtra. The history of the caves can be traced back to the Satavahana period in the 1st century BCE. They are some 9 km from the Bhaja Caves. There are two main caves. The best known cave is the chaitya (prayer hall - Cave 7) with a comparatively large stupa, the other cave is the monastery or vihara (Cave 11). They are marked by a profusion of decorative gavaksha or chaitya arch motifs.

General view



Cave 7- Chaitya





Inside Verandah

Pipal Leaf *Gavaksha*



**Stupa
inside
Chaitya**



Vihara – Cave 11



Nasik

The Nasik caves, or sometimes Pandavleni Caves (or Pandu Lena, Pandu Caves or Trirashmi Leni, *Trirashmi* being the name of the hills in which the caves are located, *Leni* being a Marathi word for caves), are a group of 24 caves carved between the 1st century BCE and the 3rd century CE, though additional sculptures were added up to about the 6th century, reflecting changes in Buddhist devotional practices. They are a significant group of early examples of Indian rock-cut architecture initially representing the Hinayana tradition. Most of the caves are viharas except for Cave 18 which is a chaitya of the 1st century BCE.

Cave – 18 Chaitya



Cave – 10,
Nahapana Vihara, 120 CE



Cave – 3, Gautamiputra Vihara, 150 CE



Junnar

Junnar is a city with thousands of years of history in the [Pune district](#) of the [Indian state](#) of [Maharashtra](#). It is situated 72 kilometers to the north of Pune. The [Indo-Scythian Western Satraps](#) ruled at Junnar during the 2nd century CE as shown by their cave inscriptions in the area of Junnar, at [Manmodi caves](#). "[Yavana](#)" (Greeks) also left donative inscriptions in the 2nd century CE at [Lenyadri](#) and [Manmodi caves](#). Total 150 caves. Thirty are important. Of these 10 are chaityagriha and rest are viharas.

Karle

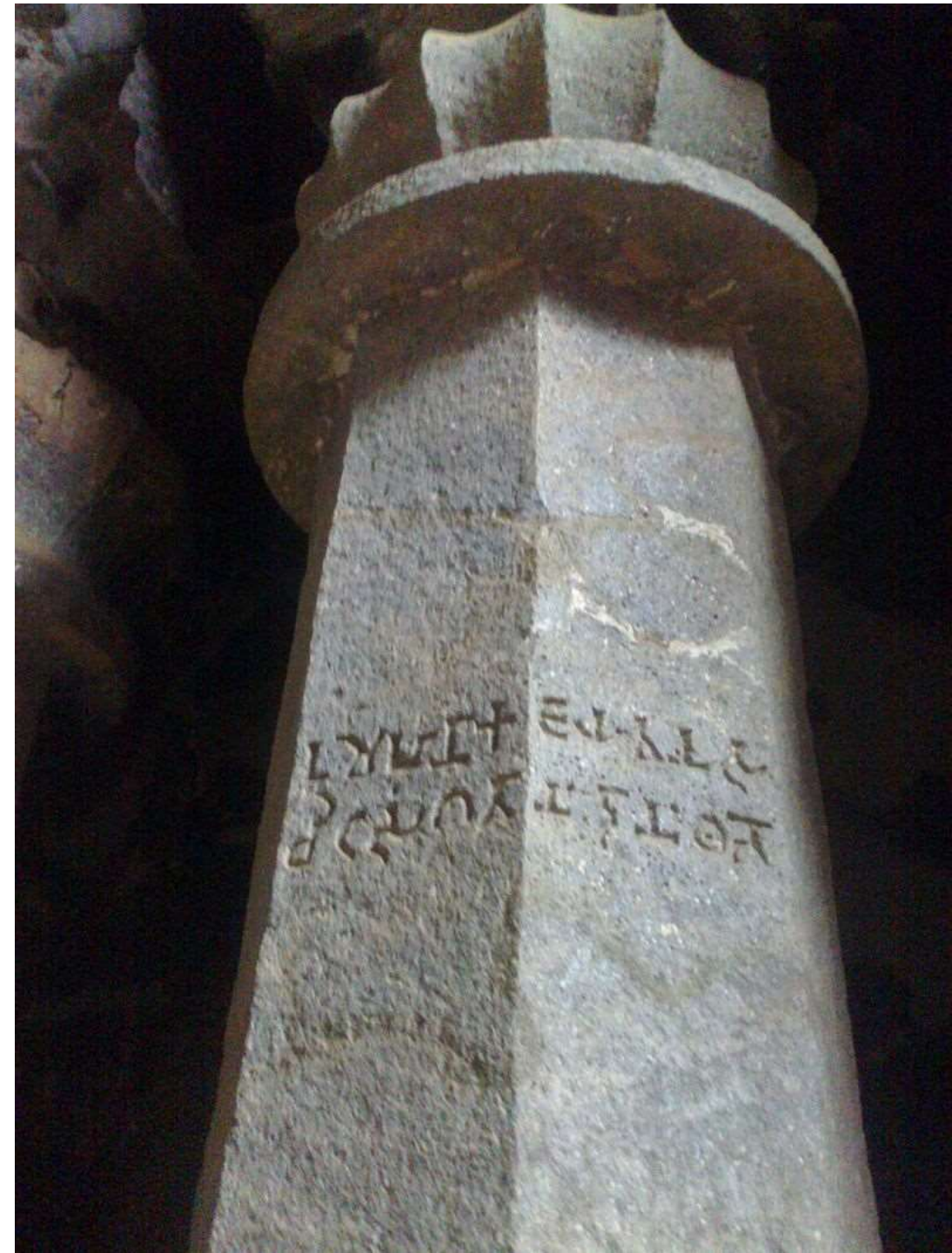
The Karla Caves, Karli Caves, Karle Caves or Karla Cells, are a complex of ancient Buddhist Indian rock-cut caves at Karli near Lonavala, Maharashtra. It is just 10.9 Kilometers away from Lonavala and 60 kilometers from Pune. The shrines were developed over the period – from the 2nd century BCE to the 5th century CE. The oldest of the cave shrines is believed to date back to 160 BCE. The group at Karla is one of the older and smaller of the many rock-cut Buddhist sites in Maharashtra, but is one of the best-known because of the famous "Grand Chaitya" (Cave 8), which is "the largest and most completely preserved" chaitya hall of the period, as well as containing unusual quantities of fine sculpture, much of it on a large scale.

There are altogether 16 caves in the group, with 3 of them being Mahayana caves. Most of the caves are *lenas*, with the major exception being the Great Chaitya, Cave No. 8. The main cave, called the Great Chaitya cave, or Cave No.8, features a large, intricately carved chaitya, or prayer hall, dating back to 120 CE. This is the largest rock-cut chaitya in India, measuring 45 metres long and up to 14 metres high. The hall features sculptures of both males and females, as well as animals such as lions and elephants. This Great Chaitya cave, the largest in South Asia, was constructed and dedicated in 120 CE by the Western Kshatrapas ruler Nahapana.

Cave - 8



Karle Inscription on pillar (5th pillar, right row, donation by a *Yavana* named **Vitasamghata**).

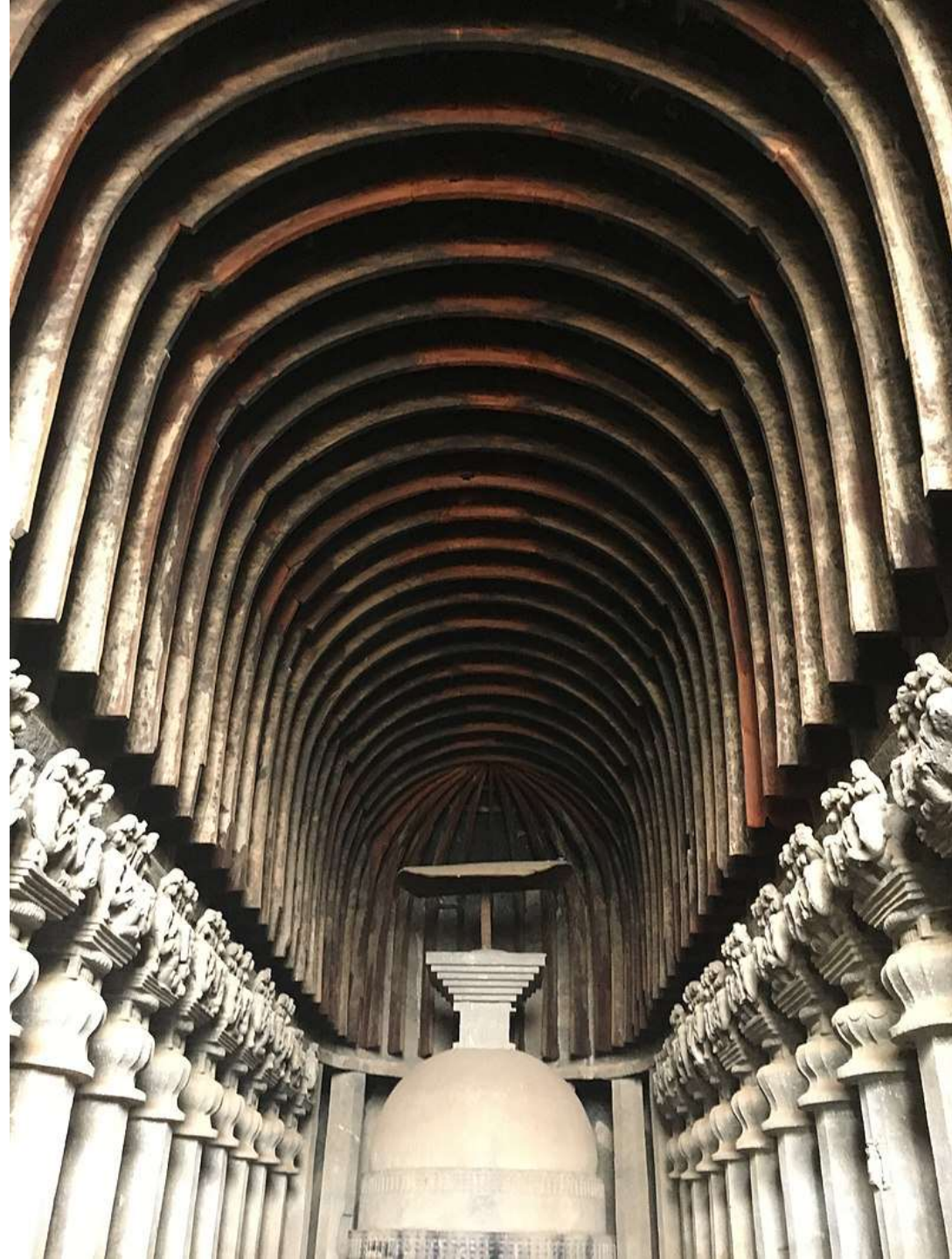




©2012

clickpur@gmail.com

Ceiling of Cave 8



Kanheri

The Kanheri Caves (*Kānherī-guhāḥ*) are a group of caves and rock-cut monuments cut into a massive basalt outcrop in the forests of the Sanjay Gandhi National Park in Mumbai, India. They contain Buddhist sculptures and relief carvings, paintings and inscriptions, dating from the 1st century BCE to the 10th century CE. *Kanheri* comes from the Sanskrit *Krishnagiri*, which means black mountain. Most of the caves were Buddhist viharas, meant for living, studying, and meditating. The larger caves, which functioned as chaityas, or halls for congregational worship, are lined with intricately carved Buddhist sculptures, reliefs, pillars and rock-cut stupas. Buddhist caves at Kanheri, a few miles from Thana, in which are about 109 separate caves, mostly small, however, and architecturally unimportant.



Cave 3

Cave 2

Cave 1



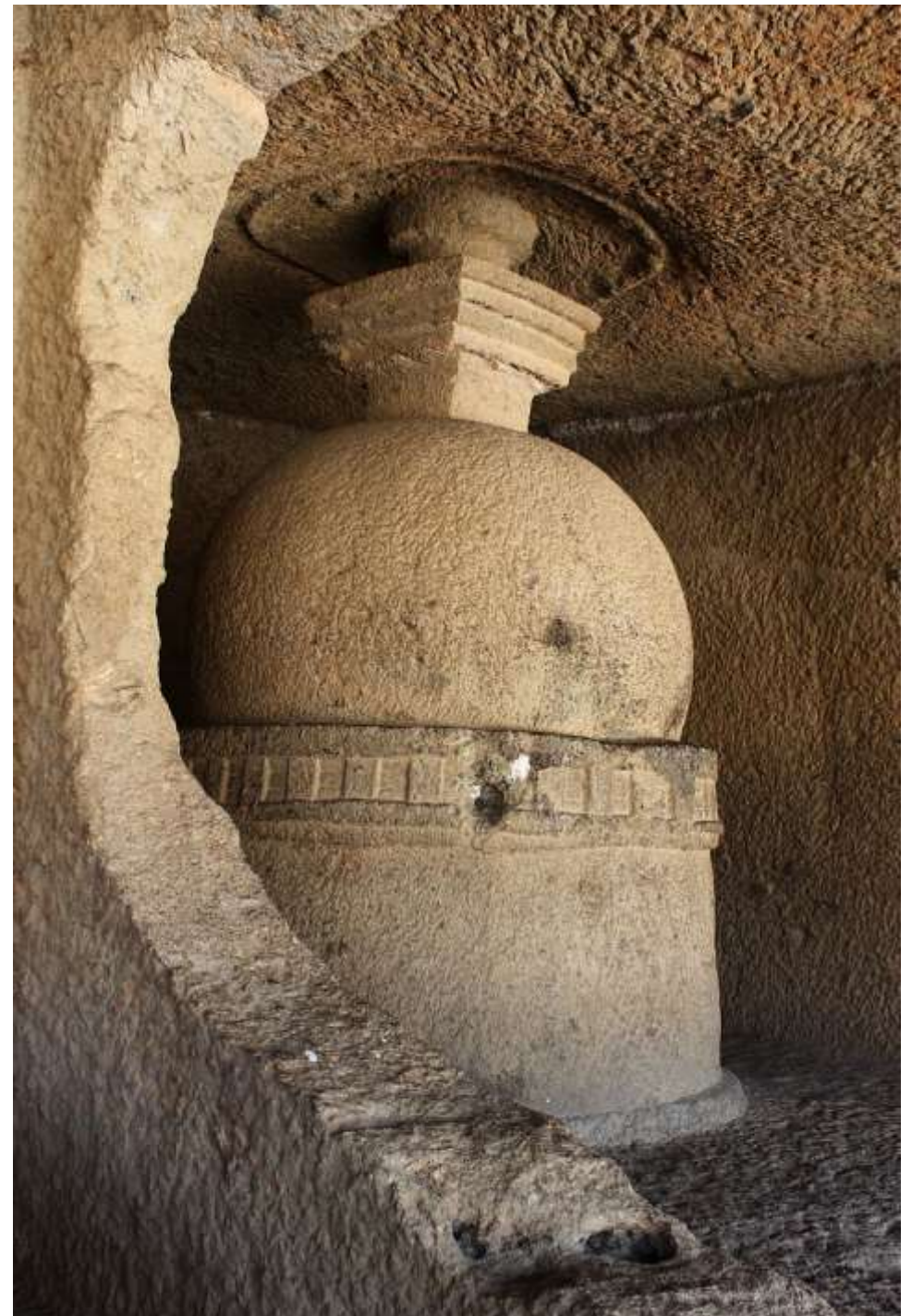
**Cave 1,
*Vihara***



Cave 2, Vihara



Stupa in Cave 2



Cave 3, Chaitya-griha

Dagoba inside Chaitya-griha



Cave 11
Darbar Cave

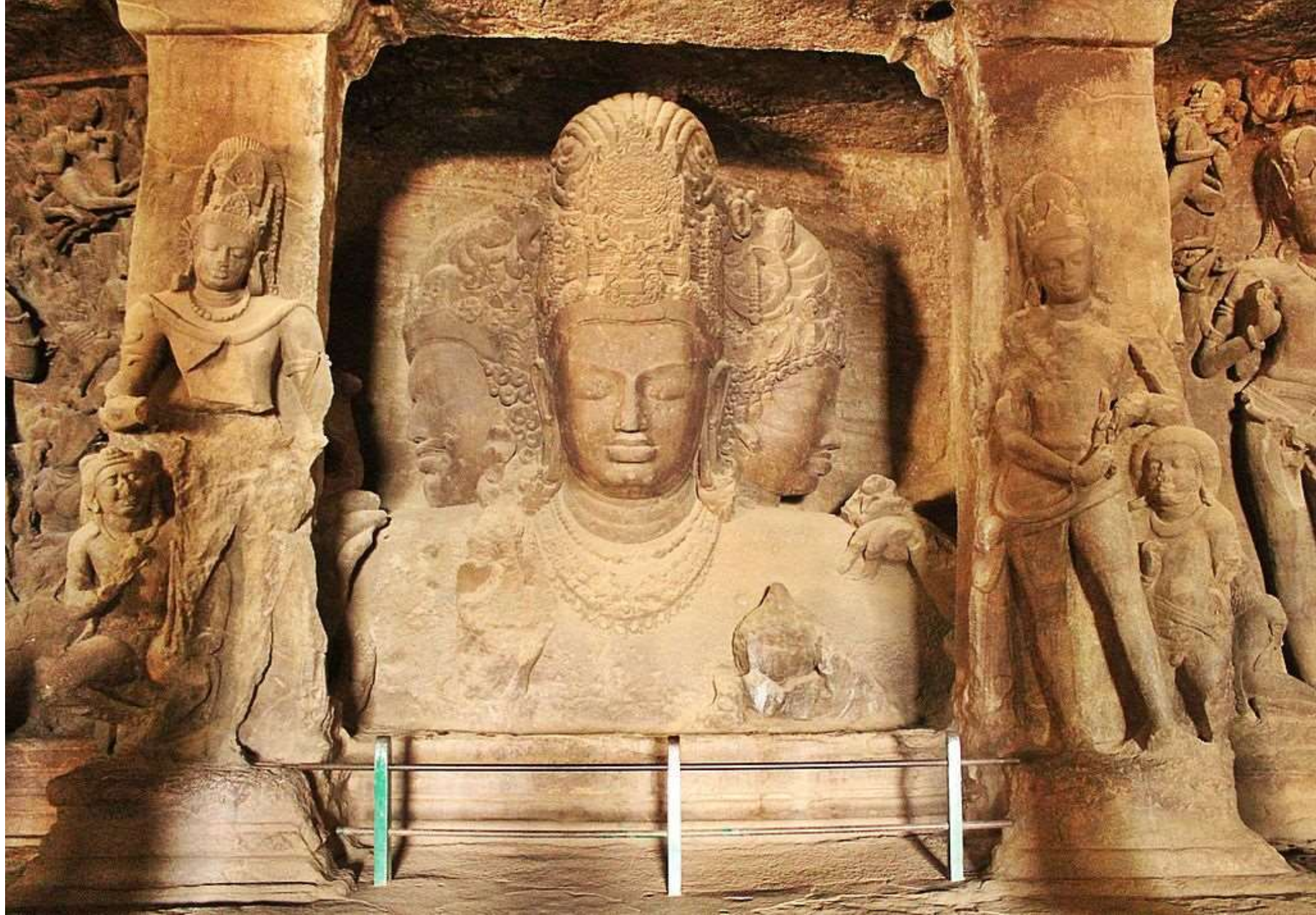


Elephanta

Elephanta Caves are a UNESCO World Heritage Site and a collection of cave temples predominantly dedicated to the Hindu god Shiva. They are located on [Elephanta Island](#), or *Gharapuri* (literally "the city of caves") in [Mumbai Harbour](#), 10 kilometres to the east of the city of [Mumbai](#). The island, located offshore about 2 kilometres west of the [Jawaharlal Nehru Port](#), consists of five [Shaivite](#) caves and a few [Buddhist](#) stupa mounds that may be dating to the 2nd century BCE, as well as a small group of two Buddhist caves with water tanks. The Elephanta Caves contain [rock cut](#) stone sculptures that show syncretism of Hindu and Buddhist ideas and iconography. The caves are hewn from solid [basalt](#) rock. Except for a few exceptions, much of the artwork is defaced and damaged. The main temple's orientation as well as the relative location of other temples are placed in a [mandala](#) pattern. The carvings narrate Hindu mythologies, with the large monolithic 20 feet Trimurti Sadashiva (three-faced Shiva), Nataraja (Lord of dance) and Yogishvara (Lord of Yoga) being the most celebrated.

Cave – 1 Façade, Main Mandapa with pillars





Cave - 3



Cave - 4



Ellora

Ellora also called Verul or Elura, is located in the Aurangabad district of Maharashtra. Ellora is a short name of ancient Elapura. It is 29 kilometres northwest of Aurangabad, and about 300 kilometres northeast of Mumbai. This is one of the largest rock-cut monastery-temple cave complexes in the world, and a UNESCO World Heritage Site, featuring Buddhist, Hindu and Jain monuments, and artwork, dating from 600-1000 CE.

There are over 100 caves at the site, all from the basalt cliffs in the Charanandri Hills, 34 of which are open to public. These consist of 12 Buddhist (caves 1–12), 17 Hindu (caves 13–29) and 5 Jain (caves 30–34) caves. Cave 16, is in particular, features the largest single monolithic monument in the world, the Kailasha temple, a chariot shaped monument dedicated to Shiva. The Kailasha temple also features sculptures depicting the gods, goddesses and mythologies found in Vaishnavism, Shaktism as well as relief panels summarizing the two major Hindu Epics.

Ellora



Drawing by James Fergusson, 19th Century











कैलाश नाथ मंदिर, औरंगाबाद महाराष्ट्र





Cave 10



Cave 11





Cave 30
Chhota Kailash

Cave 32, Indra Sabha

