A COMPREHENSIVE GUIDE WITHFULL-COLOUR PHOTOGRAPHS AND DETAILED ILLUSTRATIONS



## DISCOVER INDONESIA



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# The Mysteries of BOROBUDUR 

Text by JOHN MIKSIC Photographs by MARCELLO and ANITA TRANCHINI


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## COVER PICTURES

Front: all photographs by Marcello and Anita Tranchini.
Back: left, from Thomas Stamford Raffles' History of Java, based on a sketch by H.C. Cornelius; centre, Lucille Tham; right, Marcello Tranchini.

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## opposite

As early as 2,000 years ago, many parts of the vast Asian continent were already linked by wellestablished trade routes. Buddhism spread from India to mainland and insular Southeast Asia along these land and sea routes during the first millennium $A D$.

## below

The very first published view of Borobudur, which appeared in the second edition of the monumental work, The History of Java, written by Java's Lieutenant-Governor, Thomas Stamford Raffles. This view was based on a sketch by H.C. Cornelius (see page 11), it depicts large trees growing upon the monument which do not, however, obscure the main outline of the structure.

## Buddhism In Java

Buddhism enjoyed a short but intense period of popularity in central Java. All known Buddhist temples there, including Borobudur, were built within a century of one another, between AD 750 and 850 .

Buddhism was not in a calm, stable state during the 8th and 9th centuries when Borobudur was built. On the contrary, this was a period of intense intellectual activity. Each teacher and each country where new forms of Buddhism were developed evolved special interpretations of the religion. Indonesians must have contributed their own concepts in addition to helping spread those from India.

Buddhism was less popular than Hinduism in ancient Java. It did, however, have powerful royal patrons and both Hinduism and Buddhism were linked to two families who formed the ruling elite of Javanese society during the Borobudur period: the Sanjaya and the Sailendra.

The meaning of the word "family" in ancient Java must be explained. The Javanese have never used family names, and Javanese trace their family relationships through both males and females. Groups of kinsmen coalesce around distinguished forebears while less important ancestors are forgotten.

Buddhism in Indonesia was closely linked to an influential family known as the Sailendra or "Lords of the Mountain." This title clearly indicates that the family claimed an intimate relationship with the supernatural power which the Javanese believed hovered around mountain peaks.


The Sailendra became the dominant political family in Java around AD 780, when they displaced the Sanjaya, an older elite who were devotees of Hinduism and had been important since at least AD 732the date of the earliest known inscription to mention a kingdom in central Java.

Tension between members of the Sailendra and
Sanjaya families must have stemmed from competition
for political status, but probably had no effect on religious practices. Religion has never been a source of contention or conflict among the Javanese. The two families intermarried with the result that the children could give their loyalty to either the Sailendra or the Sanjaya.
In AD 832 the Sailendra queen, Sri Kahulunan, married a Sanjaya known as Rakai Pikatan. Pikatan gave donations to various Buddhist sanctuaries, but devoted his greatest resources and energy to the construction of the stunning Hindu complex at Prambanan.

Pikatan's reign was not entirely peaceful. Inscriptions and legends allude to war with a Sailendran prince, Balaputra, who aspired to become paramount ruler. The prince was defeated and fled to Sumatra. After about AD 850, the Sanjaya held supreme power in Java, and without the support of the Sailendra, no more great Buddhist monuments were built on the island.

Traders along the Silk
Route introduced Buddhism to China during the first centuries AD, and the new religion soon acquired a firm foothold beside the indigenous Chinese beliefs of Taoism and Confucianism.

A sea link between India and China was forged around AD 400. This new route was opened by Indonesian sailors who had several centuries of experience in maritime trade with other parts of Southeast Asia and India. Buddhist pilgrims voyaged with increasing frequency through the archipelago during the 7th and 8th centuries. The records they have left tell us that Java and Sumatra were major centers of international Buddhist scholarship during this period.

## Construction

It is impossible to calculate how much it cost the Javanese to build Borobudur in terms of labor and materials. Stone was plentiful and did not have to be transported far. The workmen probably used wooden carts to haul boulders from the nearby riverbed.


## above

Geological and archaeological studies of the ground beneath Borobudur have shown that its foundation consists of a natural hill which was reshaped by ancient Javanese builders.

Construction at Borobudur probably began around AD 760 and seems to have been completed by about 830 . Work was probably not always kept up at the same rate during this 70 year period, but proceeded in spurts. At some times, many men must have been employed, at others only a few, and activity seems to have ceased completely during certain periods.

At least one part of the monument collapsed during its construction. Perhaps other lesser setbacks also occurred. The original plan was simpler and required less labor, but plans for Borobudur changed several times and each new design necessitated more work.
Unskilled laborers performed most of the work during the early stages:
hauling the stones, leveling the earth for the foundation, and terracing the hillside. The monument's stones each weigh about 100 kilograms. If one man with one cart could transport just one stone per day, it would have taken 100 men working every day about 30 years to haul one million of them up the site. Perhaps another 100 men would have been needed to load and unload the carts and hew the boulders into rectangular shapes. If, as seems likely, they worked during only half of the year, 200 men would have been required to accomplish each of these tasks.
The number of laborers needed to carve the statues and reliefs is more difficult to estimate. A modern craftsman can complete a large Buddha statue in about one month. Thus, a group of ten carvers, working at the same pace, could have completed the Buddha statues on Borobudur in about five years. Work on the reliefs was probably divided among several groups of sculptors. The masters first sketched the main outlines of the scenes, and their apprentices then did most of the rough work. The masters returned in the final stages to apply the finishing touches to the panels.

Unfortunately, the very last stage of construction is no longer visible except in minute traces. The stones we view today when we visit Borobudur were not meant to be seen at all, for the entire monument was originally coated with white plaster and then painted. The plasterwork would have required

skill, for very fine details were molded using this medium. Borobudur would then have appeared not as a dark gray mass, but as a beacon of color hovering above the uniform green of the rice fields and coconut groves.

These rough estimates suggest that Borobudur could have been built in about 30 years by a workforce of several hundred men working every day. In reality, the rhythm of work undoubtedly fluctuated seasonally to accommodate the agricultural cycle, and took 60 or more years to complete. The construction of Borobudur was a sizable task, and the achievement of the ancient Javanese is even more impressive when we consider that other temples were being built at the same time.

The majority of workers were farmers as well as part-time artisans who may have donated their labor to earn religious merit. Evidence from other temples suggests that each village contributed a group of men who formed a fixed unit within the overall labor force. Borobudur is

impressive not merely on account of its sheer size, but because it shows how large a proportion of the Javanese population had creative talents.

Religious authorities and architects probably supervised the daily activities, but the stimulus and material support must have come from the ruler himself.
top
The entrance to the eastern stairway, leading from ground level to a walkway atop the stone encasement concealing the "hidden foot" of the monument.

## above

An aerial view of Borobudur from the north. Visitors on the upper terrace cluster around a stupa containing the statue known as Kakek Bima, which is credited by the Javanese with special powers.

# Early Javanese Society 

Borobudur tells us far more about the ancient Javanese than Javanese history can tell us about Borobudur. The monument is built of over a million blocks of stone laboriously

No traces of ancient palaces or even cities have been found in central Java, leading historians to believe that the Javanese lived in villages of approximately equal size, and that


## above

A scene from the Rudrayana story in the avadana series on the main wall of the first gallery. This is one of Borobudur's most famous panels. The faithful minister Hiru arrives at his new home. The ship on the right is one of the best sources of information we have on ancient Indonesian ship construction. It is equipped with outriggers, like traditional Southeast Asian craft, and has several sails. The house is also realistically depicted in contrast to the rather fanciful structures found in other panels. The house's construction corresponds better to what we know of houses in other parts of Indonesia than to houses in Java. It is set on pillars and the roof employs the stressed ridge beam, like houses in North Sumatra.
hauled up a hill from a nearby riverbed, then cut and carved with great artistry. This in itself is significant, for it demonstrates that Javanese society in AD 800 produced enough surplus food and labor to support a great deal of activity which did not produce direct economic benefits. The Javanese must have had abundant manpower to haul the stones, skilled craftsmen to carve them, and well-organized institutions to coordinate such an ambitious and complex project.
Above all, it is highly significant that they chose to devote a major portion of their resources to the construction of a monument which, although it perhaps served several purposes, was principally a visual aid for teaching a gentle philosophy of life. Certainly this qualifies ancient Java as one of the most humanistic societies in history.
most of the inhabitants made their living as farmers. The fertile soil and plentiful water of the Kedu Plain surrounding Borobudur must have supported a prosperous farming population, and this may have been what attracted the monument's builders to this site. Buddhist sanctuaries usually included monasteries whose monks depended for food on contributions from the surrounding population. Archaeological evidence shows that a flourishing community of laymen, as well as clergy, lived in Borobudur's environs.

Despite their emphasis on matters of a highly metaphysical nature, the Borobudur reliefs depict many events and scenes from everyday life in a manner which seems intended to communicate with ordinary people rather than religious authorities. In between religious imagery,

Borobudur provides hundreds of examples of architecture, boats, farming practices, clothing, jewelry, dancing etc. Visitors to Borobudur probably came from all classes and might have gone there for a variety of reasons. The upper terraces provide space for meditation, but in the lower galleries people would have moved at a steady pace instead of sitting before particular panels. Large crowds could earn merit simply by walking around the monument without entering it at all.

Teachers, probably monks, would have led devotees along the galleries, explaining the tenets of the faith and illustrating their lectures with the carved panels. The journey to the summit certainly took more than a

## Ten Steps to Enlightenment

In order to follow the complete narrative sequence of the reliefs from beginning to end, the pilgrim had to make ten circuits of the monument-four times around the first gallery and twice around each of the next three galleries. It is probably not a coincidence that the number ten equals the number of stages in the career of a bodhisattva, one who has attained enlightenment.
single day to complete, with much time devoted to rituals. Visitors would have performed ceremonies at various stages along the way up and around the galleries. The entire process was simultaneously a physical ascent to the summit of the mountain and an intellectual ascent to the ultimate source of spiritual power.

left
Borobudur's carvers often added embellishments that had no connection with the story, including these charming animals.

## Former Indonesian

President Suharto officially announced the completion of the restoration project in February of 1983. Echoing the words of the famous Indonesian poet, Chairil Anwar, Suharto expressed the hope that Borobudur would now live for a thousand years more. Borobudur is now one of the best preserved ancient monuments in the world. Over a million people visit the site annually.

## right

One of the earliest photographs of Borobudur, a daguerrotype by Schaefer dating from the early 1850 s . The picture, of the first gallery, shows remnants of the earth which covered and protected the monument during its thousand-year slumber.

## Reconstruction

The first reports of Borobudur show that it was overgrown with trees and that the galleries were partially filled with dirt, but the monument was not completely buried under volcanic ash as folklore says.



A committee was appointed in 1900 to consider measures to preserve Borobudur: One of its members was an unknown 28-year-old second lieutenant of engineers named Thadeus van Erp. When the government finally agreed to preserve the monument, Van Erp was put in charge of the project.
Van Erp began work in August 1907, and spent the first seven months excavating the plateau around the foot of the monument. He did not dismantle the monument, but tried to solve the problem of the collapsing walls and subsiding floors by covering the gallery pavement with a layer of concrete. He also rebuilt the circular terraces and their stupas. Many of the stupas had been systematically broken into and damaged by looters who dug as deep as two meters.
Van Erp did not solve the basic problem of water control. Water from the heavy seasonal rains still percolated through cracks between the stones down into the ground. The reliefs eroded further and the monument was slowly crumbling from without and within.

In 1971, a conference on Borobudur was held in central Java at the instigation of Dr. R. Soekmono, head of the Indonesian Archaeological Service. Due to his initiative and dedication, a major restoration project was conceived. The project tapped a wide range of expertise from Indonesia and abroad.

For ten years, most of the monument was closed to the public. Borobudur's principal glory-the galleries bearing the reliefs-was completely disassembled so that a complex drainage system could be installed. The project cost US\$25 million, of which US $\$ 6.5$ million came from foreign contributions, the rest from Indonesia's own budget.

## left

The 1974-1983 restoration of Borobudur was mainly funded by the Indonesian government with assistance from UNESCO and various other countries and foundations.
below
The deplorable state of the round upper terraces ca. 1908, before their restoration.


## Almost Lost

An excavation of Borobudur begun in 1814 by H.C.
Cornelius, a Dutch engineer working under the orders of Java's Lieutenant-Govenor Thomas Stamford Raffles, continued intermittently and the last reliefs were finally uncovered in the early 1870s. Ironically, the soil which covered Borobudur, concealing its beauty, also helped to safeguard it from damage-once exposed the stones quickly began to deteriorate.

Borobudur is a monument like no other. It consists of a series of concentric terraces of decreasing size that rise like steps to a central peak. It has no roof, no vault and no chamber.

This basic simplicity of form is counterbalanced by extraordinarily rich and complex decoration. Most striking of all, perhaps, are the beautiful bas-reliefs, in all some 1,460 carved stone panels covering a total area of about 1900 square meters, with another 600 square meters of decorative carving surrounding them

## right

The first gallery of
Borobudur. Once the pilgrim enters the corridors containing the reliefs, he is completely cut off from the outside world except for a view of the sky.

## Architecture

The Javanese came to Borobudur as pilgrims-to climb this holy manmade mountain and attain spiritual merit. Buddhists could physically and spiritually pass through the ten stages of development that would transform them into enlightened bodhisattvas.

Each of Borobudur's four lower levels contains a paneled gallery. The four trace square paths around the monument, each smaller than the one below it, so when seen from above, they form four concentric boxes.

The first gallery contains four series of reliefs-two on the outer or balustrade wall (one upper and one lower), and two on the inner or main wall. To see them consecutively, the visitor must therefore walk around the first gallery four times before climbing to the next level. The second, third, and fourth galleries each have two series of reliefs, so to see them in sequence, the visitor must walk around each level twice. To see all the reliefs in their correct order, pilgrims must consequently walk around the monument ten times, covering a total distance of nearly five kilometers.
The galleries give the visitor the
feeling of being in a high-walled corridor about two meters wide, with a view of the sky overhead. The galleries are not straight, but turn through four right-angle bends on each side. As pilgrims follow the reliefs, walking clockwise, with the monument always on their right, the journey is enlivened by these frequent changes of direction which prevent one from obtaining a view of the corridor extending for any great distance.

The reliefs are arranged so that as one ascends the monument the stories become more complicated and abstract. The upward physical progress of the pilgrim is thus a symbolic progress from the "world of illusion" to one of knowledge and enlightenment.

In the original design, only the third and fourth galleries had elaborate gateways topped by arches,


but these were later added to the first and second levels as well although most of the lower gateways have disappeared. The remaining gateways are ornate. A fearsome monster's head called a kala forms the top of an arch through which the visitor must pass. Ascending from the fourth gallery onto the round upper terraces, the visitor enters a very different realm. The densely packed decoration, rectilinear shapes and enclosed galleries of the lower levels are replaced by simple, curvilinear forms set on open, elevated terraces which offer distant views in every direction, imparting a liberating feeling of spaciousness.

Placed upon the three circular terraces are 72 stupas- 32 on the lowest terrace, 24 on the middle, and 16 on the highest. The stupas are not solid, but consist of a stone lattice constructed in such a way that the entire surface is perforated with regular geometric openings which are diamond-shaped on the first two
terraces, but square on the third. A life-sized stone Buddha statue sits within each stupa. From outside the monument, these statues are invisible and one sees only the outer sheath.

The stupas are between 3.4 and 3.8 meters in diameter and 3.5 to 3.75 meters high. The anda, or body, is bell-shaped and surmounted by a square spire, or harmika, on the first two levels, and an octagonal one on the third. These stupas may once have contained precious objects beneath the statues, but they were ransacked by treasure hunters long ago.

At the highest point of the monument, in the very center of the structure, stands a huge stupa, measuring 16 meters in diameter and surrounded by a narrow ledge that was probably intended for placing offerings. Only fragments of the original central stupa remain.

## above

Reliefs line both the main or inner wall as well as the outer or balustrade wall of each of the four galleries. The first gallery has both an upper and lower series of panels on either side, so that in all there are ten distinct series of panels. Another series of panels was originally visible along the wall of the base, but this "hidden foot" was covered during the monument's construction in order to reinforce the foundations of the building.

## DISCOVER INDONESIA



Borobudur - the largest Buddhist monument in the world - occupies a unique position in the architectural record of Indonesia's Hindu-Buddhist past. It differs from contemporary temple sites in that it does not take the form of an enclosed sanctuary housing a physical representation of a deity, but rather consists of a massive, stepped pyramid, surmounted by a huge, bell-shaped stupa. The lower portion of the edifice is embellished with stunning bas reliefs - more than one thousand in number depicting the life of Buddha and other Buddhist scriptures. These are arranged in a series of stone galleries and together constitute a narrative sequence of increasing spiritual awareness which culminates on the circular upper terraces. The latter, with their stupendous views over the Kedu valley, symbolize the formless world of pure knowledge and perfection - the beatific vision of a bodhisattva or enlightened one.

The Mysteries of Borobudur provides a comprehensive guide to the history and architecture of the monument in word and picture, with an informative text, complemented by colour photographs, maps, site plans and other visual materials.


