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ART AND ARCHAEOLOGY



'BUDDHA THE CONQUEROR'—BY NICHOLAS ROERICH
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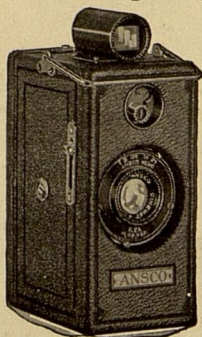
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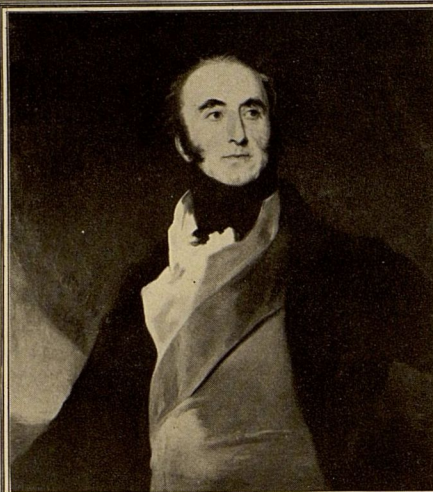


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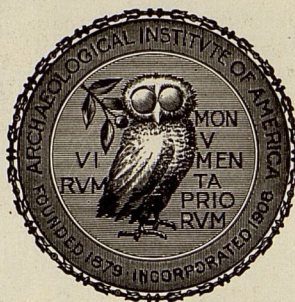
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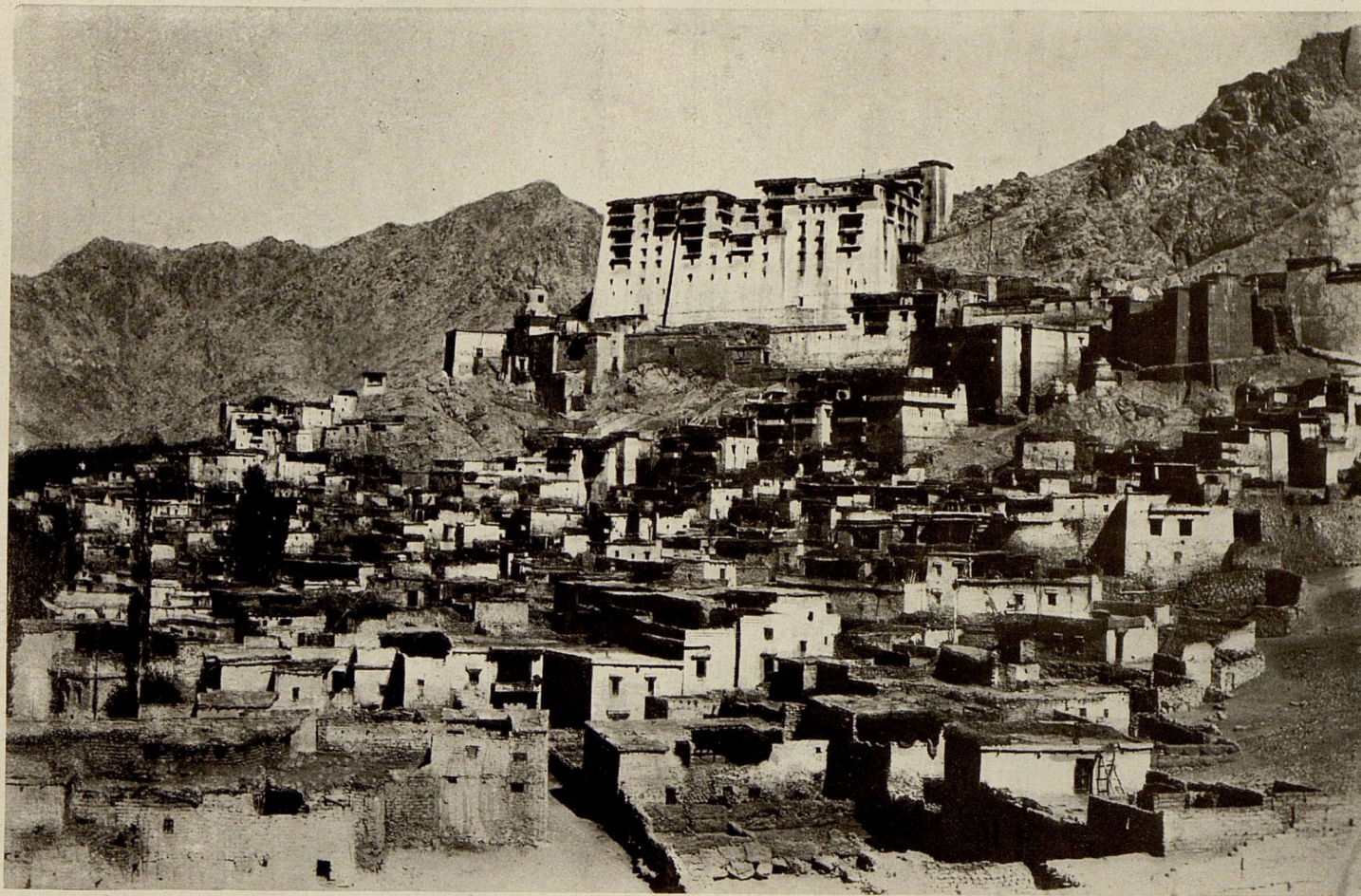
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A TIBETAN LAMASERY HAS MUCH THE ASPECT OF A FORTRESS.

ART *and* ARCHAEOLOGY

The Arts Throughout the Ages

VOLUME XXIV

JULY-AUGUST, 1927

NUMBERS 1 AND 2

NICHOLAS ROERICH: PAINTER OF ASIA

By FRANCES R. GRANT

AROUND the very name of Asia there is woven a seductive and arresting magic: the immeasurable age of her antiquities; the thunder of the hordes of Genghis and Timur; the storied domes of Kublai Khan; the silent trails, the ways of Christ and Buddha. All these are conjured up at the mention of her name.

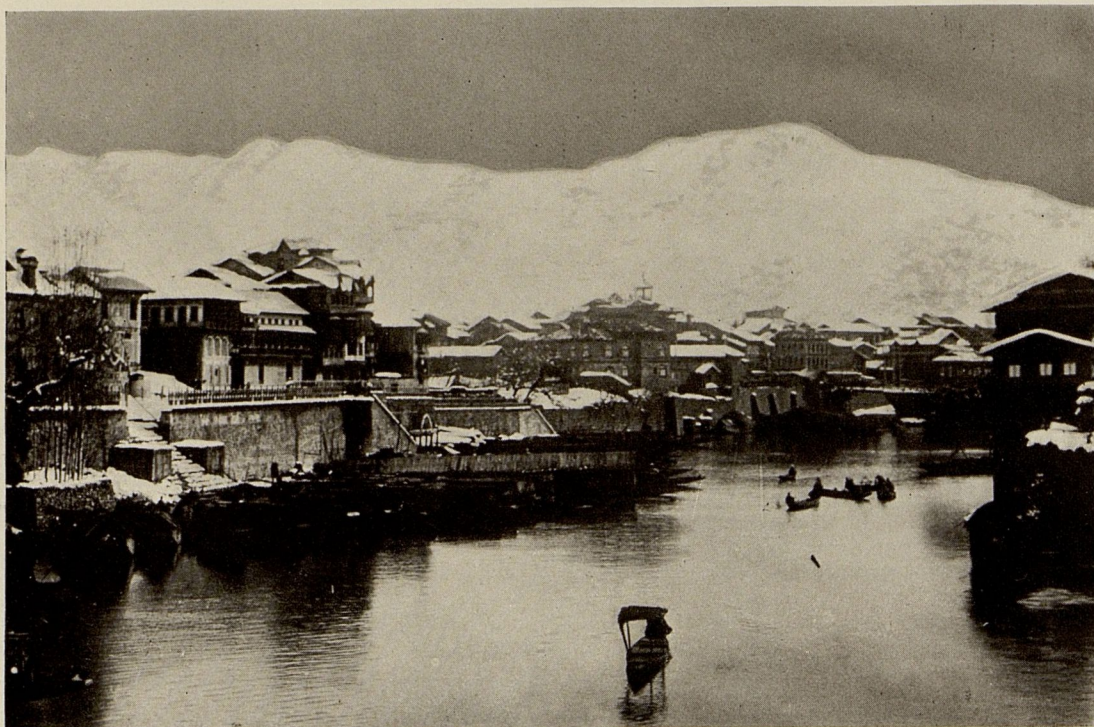
This pageant of Asia—this brilliant and luminous fantasy—is invested with a living beauty in the paintings Nicholas Roerich has sent back from the Roerich Art Expedition, and which now form a permanent part of the Roerich Museum, New York. These 150 paintings, which are included in the 600 gathered by the Museum from Roerich's 3000 creations, seem like a crown of his gigantic achievement.

From Darjeeling—that gateway to Tibet—through the Tibetan monasteries with their colorful rites; along the vales of Kashmir and the mountains of Gulmarg; then on to Little Tibet, and finally to the alluring north, across the Karakorum pass into Central

Asia, went Roerich, intrepid seeker for beauty. Indefatigably he quested the beauty of Asia. And in these paintings he has told his tale in a wordless and transfixing splendor, through which one experiences his own depths of spirit.

To the voyager travelling eastward, the never-equalled sight in Asia is the view of the Himalayas confronting him at Darjeeling. There one beholds mountains crowned by a sea of clouds, above them rising parapets which seem to transfix heaven itself. Sunset and sunrise, with their flaming skies, transform these Himalayan giants into a wall of flame, which denies entrance into the forbidden lands beyond. Before the sight the heart leaps, not alone at its beauty, but also at its symbol and at the thought of the Beyond, the Mysterious, the tangible and intangible Asia, which tempts and eludes the voyager. As Keyserling tells us, this sight carries us from out "the chrysalis of our humanity".

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SRINIGAR, KASHMIR. THE AUTUMN PALL OF SNOW SETTLES EARLY ON THIS KASHMEREAN CITY. JUST BEYOND THIS CITY LIE THE PASSES OF SODJI-LA WITH THEIR DANGEROUS GLACIERS, AND THESE WERE CROSSED BY NICHOLAS ROERICH, ON THE ROERICH ART EXPEDITION, INTO ASIA.

It was before this vista of the summits of earth that Roerich made his first stop on his expedition to the East. Beyond Darjeeling—the last outpost of most voyagers—is a hill upon which stands the palace Talai Pho Brang. Some ten years ago when the Dalai Lama of Tibet was forced to flee from his sacred Potala in the forbidden city of Lhasa, he dwelt in this palace. Here he sat in daily meditation, looking out over the ramparts which hid from his sight his beloved country. As the Tibetan lamas related to Roerich, he neither slept nor rested. For three years he was ever in the posture of prayer and sent his benevolence across the heights to his people, until the day when he could give up his exile and return to Lhasa.

Since that time—seven years ago—his palace has been empty. Into this palace as a dweller came Roerich, in 1923. From this vantage point he desired to paint the awe-impelling sight which rises here to silence and enfold the onlooker. To the lamas of Tibet the occupation by the artist of this sacred dwelling was not accidental, and many of them came to pay homage to a priest of western beauty.

It is in Roerich's series "His Country" that one finds the first thunderous expression of the artist's theme: the beginning of the passage into Asia. In the palace of the Dalai Lama, with all its enveloping suggestions, facing Mount Everest and the sacred mountain Kinchinjunga, the White Lady crowned with the inevitable veil of snow, the

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artist rested his easel and painted the lofty places of "His Country".

In this series each work has an individual message, but each relates to the other as do the chords in a great symphony. For instance, in the painting *He Who Hastens*, one is stirred by the throbbing of the eastern pulse. It is sunset—the last gleams of sunset, when the entire archivault of heaven is reflected back from the Himalayan glaciers. The whole is like an undulating red ocean. One is very close to the slopes of Everest, feels its majesty and is silenced by its heroic size. But it is not the mountain peaks which hold one rapt. In the foreground is a great cliff, standing like an outer wall before the world's highest peak. Across its precipice—with eternity below him—a rider on horseback leaps, fleet as the

wind. Professor Roerich has marked the swift Tibetans often traverse the clefts in the mountain; it is not a rare sight there. But within this painting one feels more—the moving exhilaration of the Asiatic rider, the spirit of conquest; one hears the galloping of Tartars, of Mongols. There is a wind coming from this painting. It spells the new Asiatic messenger.

Leaving this palace, Professor Roerich took an extended trip through the Tibetan monasteries. His caravan of many horses and a retinue of natives made its way along the paths of Sikkim, Nepal, and along the mountain trails of Tibet. High up on the seemingly impassible peaks stand these lamaseries, citadels of the Red and Yellow sects of Tibet.



ALONG THE MOUNTAIN TRAILS OF TIBET, AMONG GLACIERS AND SAVAGE PEAKS, MAN SEEMS A PUNY CREATURE.



RED LAMAS OF HEMIS MONASTERY IN LADAK IN DEVIL DANCE.



"rDORJE, THE DARING ONE" (BANNERS OF THE EAST SERIES) BY NICHOLAS ROERICH.
ROERICH MUSEUM, NEW YORK.

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These sects were founded respectively by Padma Sambhava and Tzong Kha Pa, the great Tibetan reformers. They differ not merely in the garbs of their lamas, but in the spirit of their rites, for the Red adheres to the magic and form of early ceremony while the Yellow remembers the austerity of the Gautama.

Year's rites of the lamas. The mountain roads are filled with holiday voyagers, festively garbed. On each peak, crowned by the *mendangs*, or shrines, with their benches for meditation overlooking vast distances, meditating travelers seat themselves. Beside these shrines wave banners as prayers for dead or living.



"CONFUCIUS, THE JUST ONE" (BANNERS OF THE EAST SERIES) BY NICHOLAS ROERICH, ROERICH MUSEUM, NEW YORK.

Hailed by the trumpets of the lamas, who eagerly welcomed this messenger of beauty, Roerich visited the monasteries Sanga Chelling, Tashi-ding, Rinchenpong and others which lie like ramparts above the clouds, crowning each hill for miles around on the heights of Nepal and Sikkim and on all Tibetan paths.

It was during the season of the Tibetan New Year that Professor Roerich made his monastery trip. To each monastery, at that season, come the pilgrims desiring to view the New

In each monastery, as the artist visited it, the lamas pointed out some sacred relic, some worshipped wonder. In Sanga Chelling, founded by the great Padma Sambhava, of the Red sect, it is the stone of meditation looking out over the Himalayan eternities. This stone is said to creak whenever the monastery life is impure.

To Tashi-ding also Roerich bent his way. It lies upon the mountain of the White Stone, above the "Valley Open to Heaven"—on the highest summit. Recently trails to this abode of the

ART AND ARCHAEOLOGY

monks have been cut out of the rocks, but they nevertheless still offer the pilgrim a weary journey upwards. Midway up the giant slope, one has to cross a deep gorge, above a roaring mountain river. The bridge across is a swinging bamboo, which trembles beneath one's feet. Often the traveler

the self-filling chalice, the ceremony observed each year at New Year. At that time, with all ceremony and in the presence of witnesses who include representatives of the Maharajah, occurs the sacred ceremony. An ancient chalice is filled with water from the stream which flows down from the



"MOSES, THE LEADER" (BANNERS OF THE EAST SERIES) BY NICHOLAS ROERICH, ROERICH MUSEUM, NEW YORK.

takes a deep inward breath, and wonders if he will ever touch the other side. But to pause is dangerous. Finally the slope is reached, and then comes the climb up to the monastery on the summit. When half way up, the trumpets of welcome from the monasteries resound, and the lamas wait in a row, elegantly garbed, with smiles of welcome for Roerich. This bringer of beauty, uniting East and West, is a welcome visitor.

It was in the Monastery Tashi-ding that Roerich witnessed the mystery of

sacred mountain Kinchinjunga. Amidst prayer and ceremony the chalice is hermetically sealed and placed upon the altar. A year later, with the same ceremony, and during the same festival, it is opened, the water is measured and by it are predicted the coming year's events. Sometimes the water has increased, sometimes decreased, and by this is foretold the events of the years. In the year of the World War, the chalice is said to have tripled its water—this meant war. This season it has

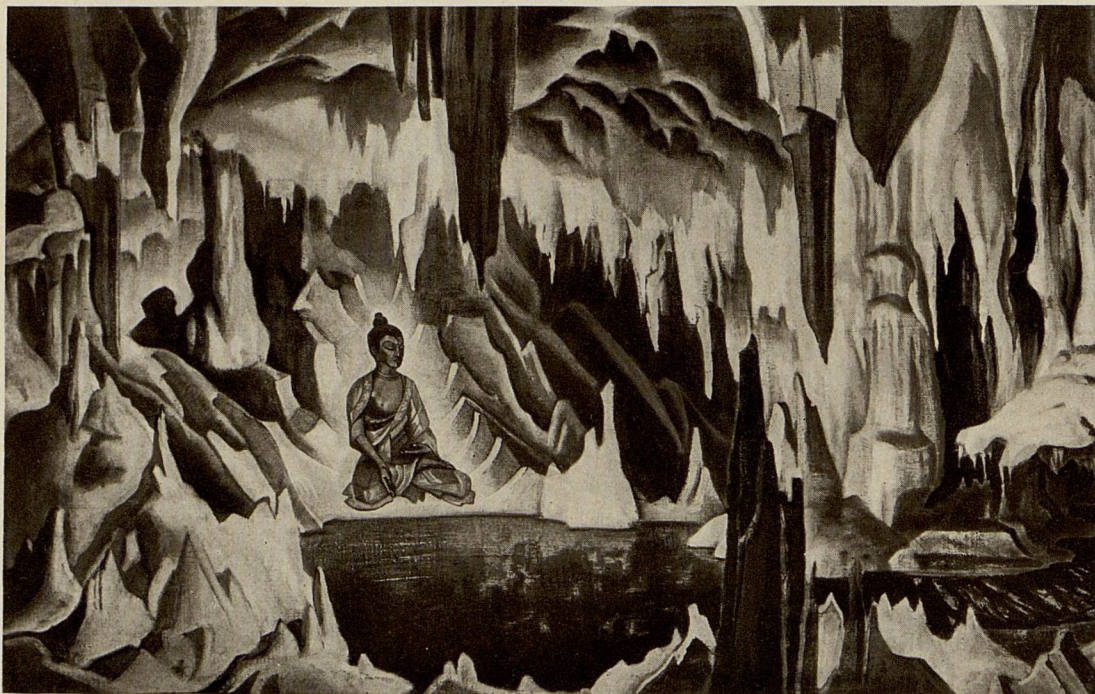
ART AND ARCHAEOLOGY

lessened—which means war and famine, also social disorder.

On these occasions also there are presented the sacred dances, performances of miracle plays akin in spirit to our own morality plays, but with the added color and glamor of Tibetan fantasy.

these themes, which are presented before the awed spectators, in brilliant garbs and masques.

Another sight in Tashi-ding is the ceremony, held in the monastery, of the thousand lights. Rows of lights flame along the panelled walls of the narrow structure and on lines of tables,



"BUDDHA THE CONQUEROR" (BANNERS OF THE EAST SERIES) BY NICHOLAS ROERICH, ROERICH MUSEUM, NEW YORK.

Like our own mysteries, the dances of the monasteries present the peregrinations of the spirit, and draw a moral for the benefit of the spectator. Varying in the monasteries of each sect, the dances may perhaps show the judgment of the dead, when the lamas depict the contumely heaped upon the evil soul, while the good reaches a benign paradise. Or again, they show the good spirit vainly besieged by temptations in the disguise of yaks or lions. Numerous are the variations of

all enveloped in the fragrant haze of burning incense. The trumpets blow. Quivering, the resounding air sets this flaming veil of light vibrating in an unforgettably weird and moving spectacle, to which the voices of the lamas add the final note of mystery as their intonations of the sacred writings rise and fall in the reverberating chamber and the faces of celebrants and spectators alike move in the fiery glow. The spirit of this East is transmuted in these astonishing paintings of the

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monasteries so that he who has never seen, can yet see and feel, moved out of himself by the intangible and perceiving the force of the doctrines of the Gautama and the ever-breathing visage of the yellow-robed lion-conqueror.

But it is not alone the colorful brilliance of Asia that speaks its arresting message from the paintings of the

have all legends, in fact. For on the road to Phalut are many flowers of the black aconite which has such great medicinal value and which, because of its phosphorescence, glows at night. Roerich has also painted the legends of the *Treasure of the World* and the *Burning of Darkness*—the legends of the flaming sacred treasure with which is linked the destiny of the world, and



"THE CHALICE OF CHRIST" (BANNERS OF THE EAST SERIES) BY NICHOLAS ROERICH, ROERICH MUSEUM, NEW YORK.

master artist. There is the other side of Asia, which has so deeply touched Professor Roerich as he traversed the passes of Asia's life—that of her spirit, the deeply meditative side of Asia which has gestated for centuries like a lotus bud. The dreams of Asia live again in the panorama of his work. In *The Fire-Blossom* has been reborn the story of the sacred blossom. According to Tibetan legend, whosoever finds the blossom shall win benevolence for mankind. This has its foundation, as

which is carried to earth on a white steed, unguided.

But it is in the deepest aspect of the East—in the definition of her gift to the West—that Professor Roerich has reached the summit of his work. In his series of paintings *Banners of the East* he has shown the great teachers of the world at their moments of highest illumination. On his way through the East, he found the threads of all the great teachers of the world. In Kashmir he discovered the beauty and light

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of the succeeding waves of civilization as they intertwined and united, inspiring him to paint the supreme moments of each great spiritual leader.

So he painted Christ, Moses, Buddha, Mohammed, Confucius and others of those great spirits who walked the ways of Asia. His *Mohammed on Mount Hira* shows the Moslem prophet upon the mountain at that moment when, we are told, the Archangel Gabriel appeared and related to him his mission. It is roseate dawn and through a white vapor is seen the exalted figure of the angel with a flaming chalice. *Moses the Leader* is seen on Mount Sinai, where the tablets

of the law are transmitted to him. Roerich has not visualized the brawny Moses of a Michael Angelo; his Moses is a cosmic figure. The prophet is upon the mountain; above him the heavens in swirling folds of light and color seem to be performing a great ritual, cosmic in its import.

For his painting of Confucius, Professor Roerich took the Chinese Sage in his cart upon a mountain trail—the Confucius of exile, the prophet who had to have his cart ever at hand to escape the persecutions of his contemporaries.

Buddha the Conqueror is also seen in a new light—not at Boddha-Gaya under the Bo tree, but in the caves of the



"SHE WHO LEADS" (HIS COUNTRY SERIES) BY NICHOLAS ROERICH, ROERICH MUSEUM, NEW YORK.

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Himalayas where he attained supreme initiation as the conqueror of self.

Of the two paintings of Christ in this series, one shows Him during His vigil in the garden of Gethsemane—the *Chalice of Christ*. Many have painted this moment of renunciation, but the writer does not recall another conception where the loneliness of Christ is transmitted with such poignancy. It is the hour before dawn—beyond are the dim outlines of Jerusalem. The painting is bathed in the green of the twilight hour—and the stars alone are the witnesses of that supreme vigil.

It is not only the leaders of its past but its hopes for a coming leader which Roerich reveals in this series. The East is now filled with its age-old hope, never more ardent than at the present hour, that the coming of the Buddha Maitreya, he who for centuries has been

looked to as the promised deliverer, is close at hand.

For today two great emotions stir the spiritual East—this hope of the coming of the Buddha Maitreya and the other, the revival of the cult of the Mother of the World. In the events in the East—beginning with the flight of the Tashi Lama from his sacred monastery in Shigatse two years ago—Asia sees the impetus for the fulfillment of its prophecies. The consummation of the many events will culminate in the advent of the new leader bringing beneficence for all the world. And in this moment is also seen the great era of the Mother of the World. The ancient cults which revered womanhood in the figures of Astarte and Isis, are once again invested with a new life and it is in womanhood—in a Kwan-Yuen or White Tara—that the East sees the instrument of this new spiritual wave.



"LAO TZE" (BANNERS OF THE EAST SERIES) BY NICHOLAS ROERICH, ROERICH MUSEUM, NEW YORK.

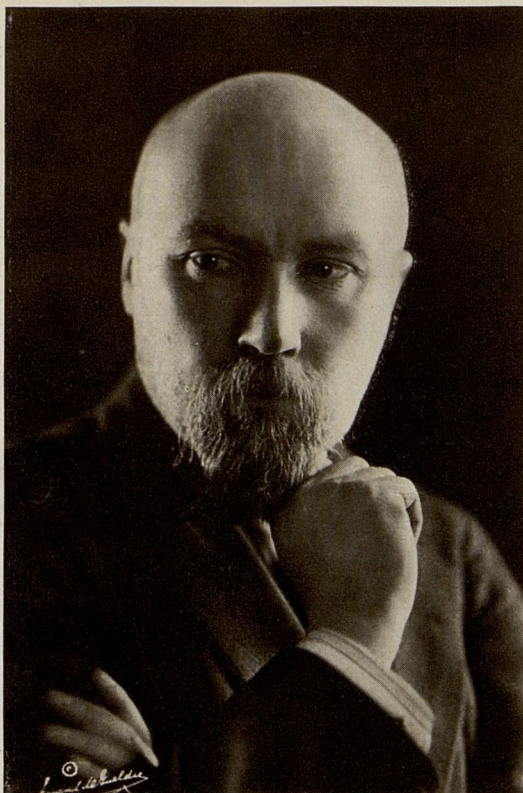
ART AND ARCHAEOLOGY

Several of the paintings envisage for us this new reverence for Womanhood. In *She Who Leads, The Mother of the World* and *Star of the Mother of the World* is reflected this Eastern hope. Thus in the first the woman—White Tara—is shown guiding the pilgrim over dangerous mountain glaciers. In *Star of the Mother of the World*, it is night in the desert, another night of the Magi, in which the caravan silently follows this new guiding star of the East.

Professor Roerich has remembered not merely Asia's mystery—he has remembered her superb destiny, which allowed her to be the source of each religion in turn. He has transmitted her that truth which is beauty and that color, her antiquity, her fantasy, her beauty which is truth."

mystery. But his final word is that of the beauty of her ancient spirit. In the words of Claude Bragdon:

"One has the feeling that in everything Roerich does he is seeking the hidden truth, the unrevealed beauty; the Lost Word, in point of fact. Like some mighty, indefatigable hunter, armed not with a gun, but with his brushes and paints, he stalks his quarry from country to country, across oceans, mountains, though knowing all the while that the thing he is seeking is in himself. To look at the six hundred or more paintings of his in the Roerich Museum is to participate in this adventure and to draw nearer to

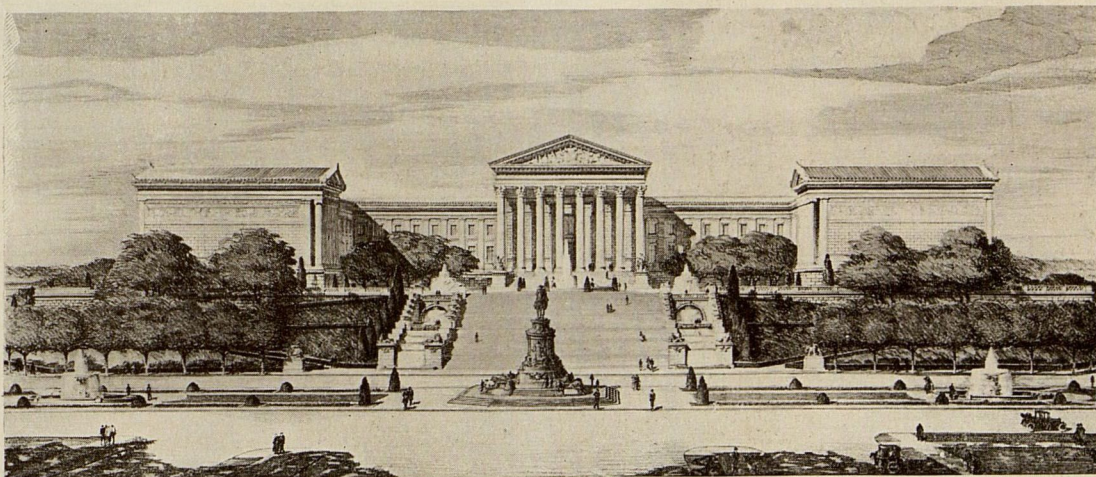


PROFESSOR NICHOLAS ROERICH.

PORTRAIT IMPRESSION: MUMTAZI-MAHAL

*My lord, the crystal shows a bubble blown
Of marble, girt with slabs of polished jet.
Thrice and again a flying minaret
Soars into space. I see the peacock throne
Draped in a pall of sable. Tears that flow
Into the quiet Jumna lap the base
Of mighty arches frosted into lace
By patient hands. Cypress and myrtle grow
So close no light can penetrate the dark
Of humid tunnels. Here and there are strewn
Marmoreal petals of a shattered moon.
One other thing I see: a figure stark
In sleep of death upon a narrow shelf
Crusted with precious stones; myself. Myself!*

—Margaret Tod Ritter.



PHILADELPHIA MUSEUM OF ART. ARCHITECTS' PERSPECTIVE DRAWING BY J. F. ABELE. HORACE TRUMBAUER, C. C. ZANTZINGER AND C. L. BORIE, JR., ASSOCIATE ARCHITECTS.

ARCHITECTURAL POLYCHROMY

THE GREEK REVIVAL IN THE PHILADELPHIA MUSEUM OF ART

By EDWARD H. PUTNAM

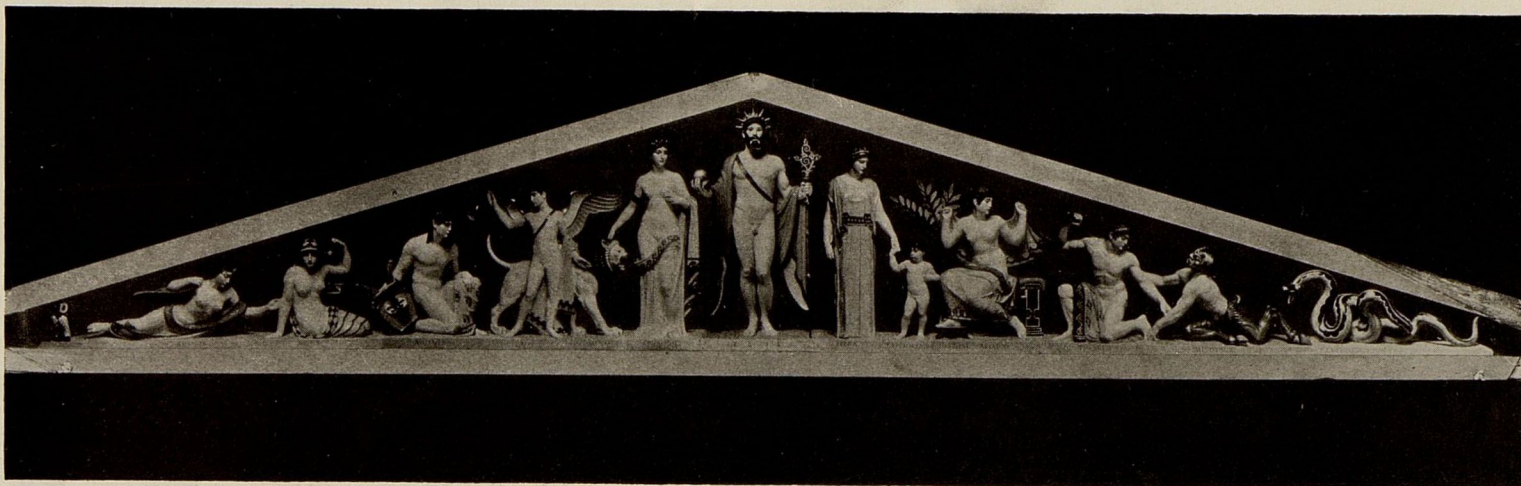
FOR many years the Greek temples of the IVth and Vth centuries, B. C., have stood for everything that was chaste and dignified in architecture. The realization that these temples were originally examples of brilliant polychromy has been reached only in the past few years.

As a consequence the great majority of reproductions and adaptations in accordance with Greek tradition, executed in marble, granite, limestone or terra cotta in monochrome, have missed the most important architectural element, color. It remained for the Park Commission of Philadelphia to break the mistaken tradition of monochrome and to erect the Philadelphia Museum of Art, closely reproducing the lines of a Greek temple, in the same colors, and applied in the same way, as they were used and applied by early Greek architects.

Determination of the colors was a task that required the most painstaking research. Temples that have remained standing in broad sunlight for centuries have lost every trace of color, for ceramic colors—produced by the intense temperatures of kiln-burning—are the only enduring colors, and the art of terra cotta glazing was unknown to the Greeks.

Faint colors remain on fragments that have lain buried for many centuries—such, for example, as have recently been discovered at Sardis and Corinth—and from these fragments it has been possible to reconstruct the Greek palette, just as the palaeontologist is able to reconstruct an entire prehistoric skeleton from a small fragment of bone.

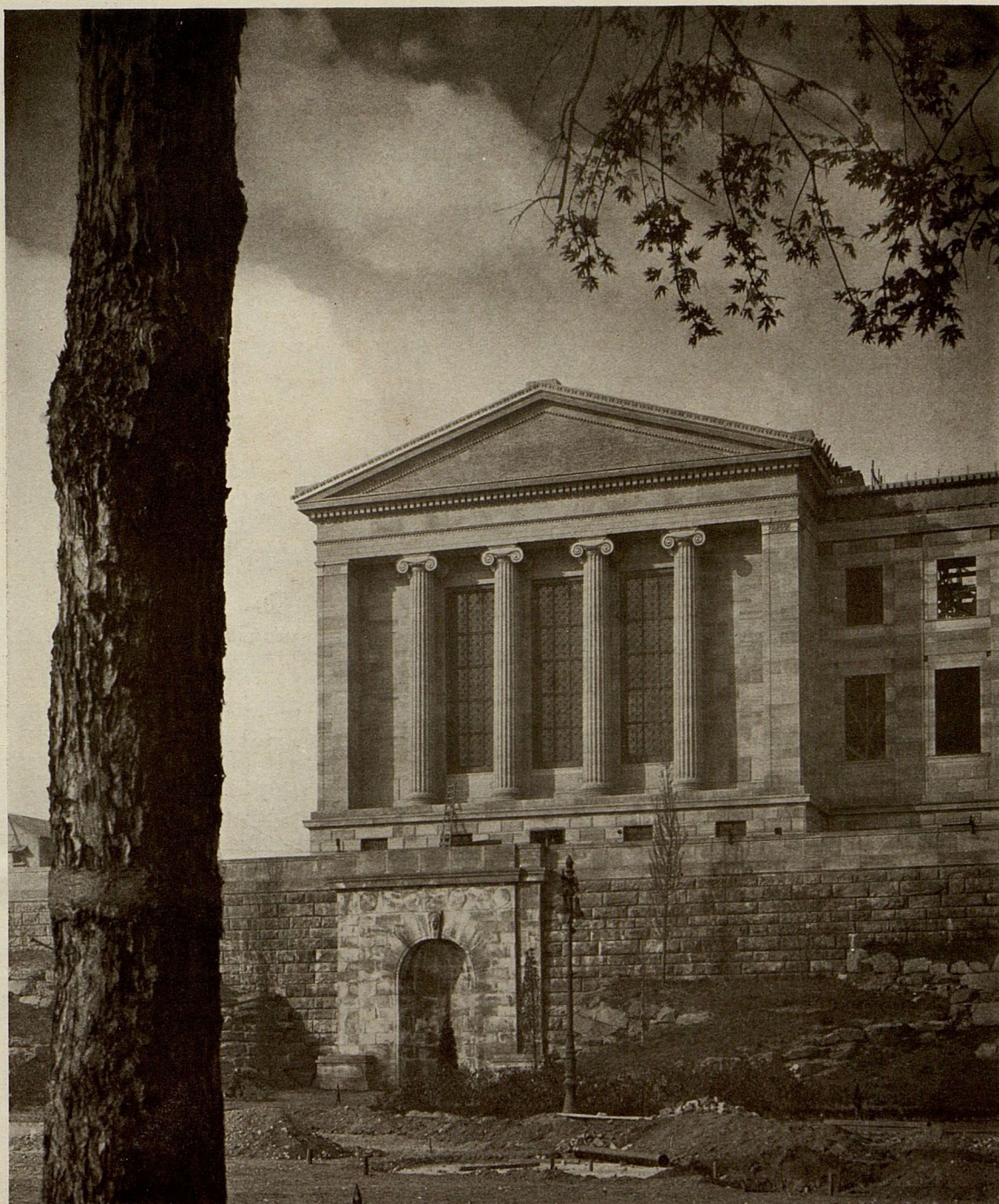
Mr. Leon V. Solon, one of the foremost authorities on ancient polychrome, collaborated with the archi-



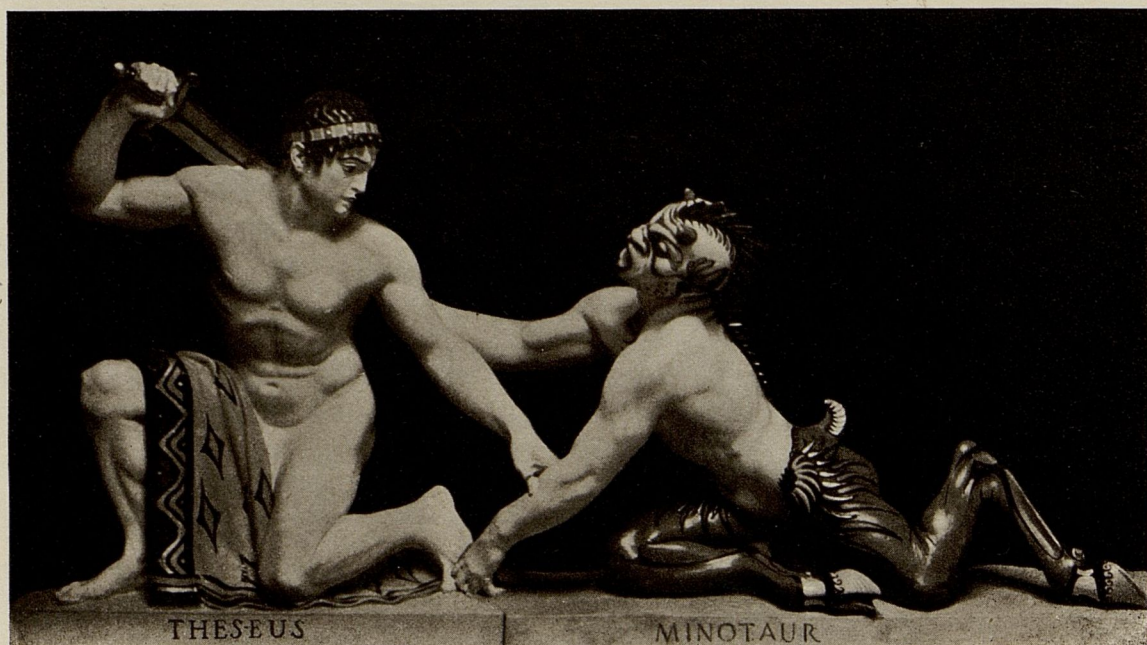
PEDIMENT PANEL SHOWING FIGURES OF THE NATIONS, WITH INDIA IN THE CENTRE, EGYPT AT THE LEFT AND BABYLON TO THE RIGHT. ALL WILL BE IN POLYCHROME TERRA COTTA. BESIDE BABYLON STANDS XERXES. NEXT HIM "THE SULTAN" SITS LISTENING TO SCHEHERAZADE. ON THE OTHER SIDE, NEXT TO EGYPT, IS ISAIAH. "THE ROSE OF SHARON" LEANS TOWARD THE SEATED FIGURE OF SOLOMON. JOHN GREGORY WAS THE SCULPTOR. THE COLOR SCHEME IN ALL PANELS WAS PREPARED BY LEON V. SOLON.



ANOTHER PEDIMENT PANEL IN POLYCHROME TERRA COTTA. ZEUS IS THE CENTRAL FIGURE. AT THE READER'S RIGHT COME HERA, THE LITTLE TRIPTOLEMUS, ARIADNE, THESEUS AND THE MINOTAUR. AT THE LEFT, APHRODITE IS NEXT TO ZEUS; THEN COME EROS, ADONIS, EROS AND AURORA OR EOS. THE SCULPTOR WAS PAUL JENNEWEIN.



ONE OF THE TETRASTYLE PORTICOS AS SEEN FROM THE PARKWAY, SHOWING THE REAR VIEW OF A PAVILION. THE MAIN PORTICO IS OCTASTYLE AND THE SIDE PORTICOS HEXASTYLE. NOTE THE CONTINUATION OF THE TERRA COTTA CORNICE ALL AROUND THE STRUCTURE.



THE EFFECTIVENESS OF MR. JENNEWAIN'S NOVEL CONCEPTION OF THE THESEAN LEGEND OWES MUCH TO THE BRILLIANT COLOR WHICH THROWS THE FIGURES INTO BOLD RELIEF.

tects and sculptors in the polychrome treatment of the new museum. His knowledge is based on his own discoveries in Greece. Mr. Solon describes the Greek system of polychromy as follows:

"When a number of records of color-location were compared, the nature of the system was so simple that it was as apparent to the investigator as to the Greek who produced it. It was based upon a simple classification of structural features into two groups; in one of these, a simple structural function directed to enclose space or support weight; in the other, to beautify was the dominant direction in artistic effort. With this simple classification in the component features of a facade, the location of color was a logical deduction. Color under no circumstances can be regarded as having structural

significance; its obvious purpose in application is decorative. With the invariable directness of Greek mentality in all artistic concepts, it was impossible to confuse the structural significance of a feature with the decorative, and color consequently only appeared upon those items which were either exclusively decorative, or were on the dividing line between the structural and the ornamental.

"In Greek architecture we find the first instance of structural organization, or a principle in structure which emphasized the interrelation and function of each item. With this condition in design it became a simple matter to regulate color-location, and this accounts for the absolute uniformity found through its practice. The next style investigated was the Gothic, and although it represents an absolute op-

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posite to the systematized order of expression, this same fundamental relation of color to decorative function was intuitively followed.

"In modern practice we have another type of composition to take in color application, but the same relation will be ultimately recognized in color-location as in the Gothic and Greek. It involves many problems which never previously existed in connection with conditions in visibility and the greatly increased range for observation in the modern American city, as compared with that of former times with the narrow streets of ancient cities, which placed the point of effect-reception much nearer the structure.

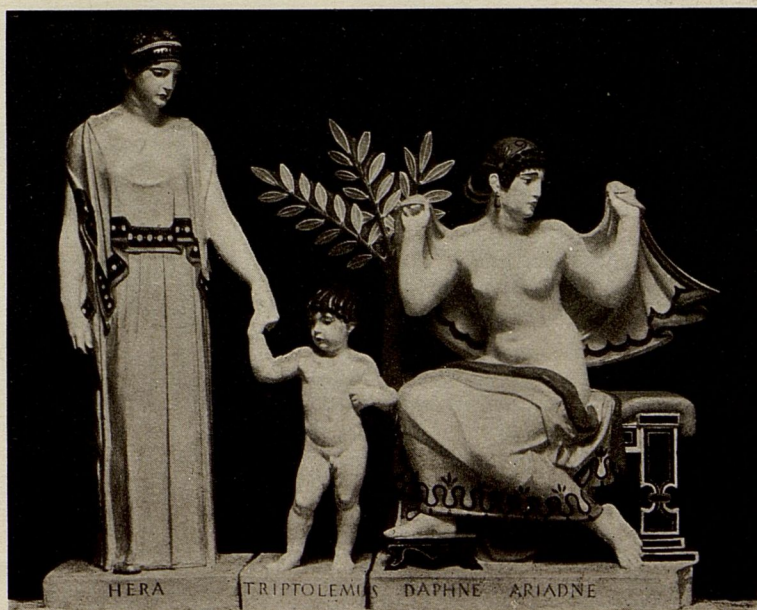
"The advent of color into architectural effect introduces not only architectural and artistic problems, but also necessities for industrial adjustment. We begin to realize that several important national industries are successful in their year's trading, in a measure corresponding to the extent to which they are capable of stimulating sensory reaction in those who use their goods by artistic coloring. In structural material this is an important factor. The architect gives concentrated attention to the color of the stone which is employed, and will give a preference in price to the product of some quarry which has a distinctive tonal quality."

The actual colors used in the archi-

tectural decoration of the Philadelphia Museum of Art were scarlet vermilion, gold, black, buff, blue and green, and in the majority of cases the surfaces were lustrous glazes, a surface that reflects the light brilliantly.

One of the most colorful features of the building is the roof of hand-made terra cotta tile. The upper surface is a varying turquoise blue, the edges are dark blue, the cresting gold, blue and black. The color of the roof to the eye depends upon the point of view. From the front the dark blue edges of the tile give a dark color effect; from the side the edges are not so apparent, and the turquoise effect is predominant. In making a circuit of the building many different tonal effects are apparent, all modified, changed and altered by light and shadow as well as by the varying and different colors.

The projected pediment-panels with their polychrome sculpture are the



THE FIGURES OF HERA, TRIPTOLEMUS AND ARIADNE, FROM THE PANEL BY JENNEWEIN.

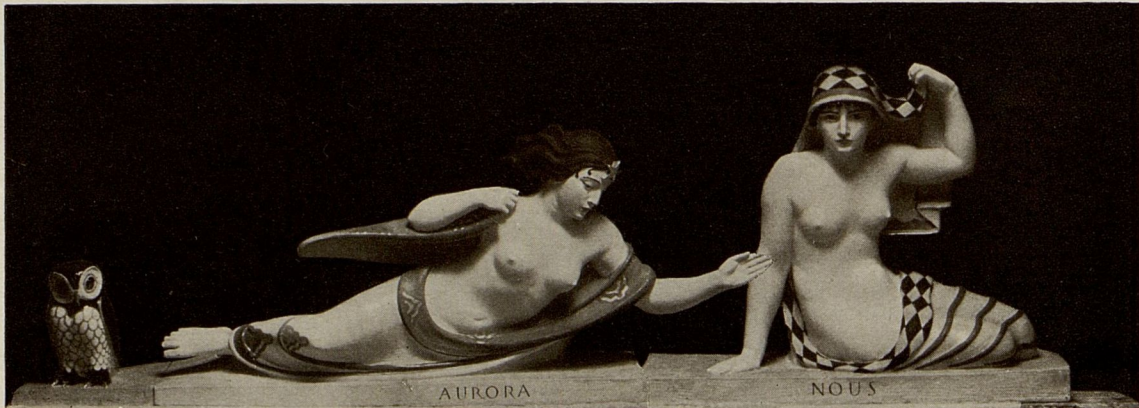
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predominant features of the building. These are strictly in accordance with Greek tradition, for all the early Greek statues, whether used architecturally or as individual pieces, were invariably colored. Color in the sculptor's hands amounts almost to a fourth dimension. It works in two ways. He can conventionalize his subject by the use of color, or make it naturalistic to the last degree. The two methods are exemplified in the studies by Mr. Jennewein and Mr. Gregory.

Altogether, the Philadelphia Museum of Art is magnificent in conception and magnificent in execution. To the student of architecture and to the archaeologist the Museum is highly

significant of the Greek temple of 500 B. C. The elemental difference is structural. The originals were of solid masonry construction; the Philadelphia Museum has a steel frame.

The Greeks used terra cotta in many instances for plastic modeled detail, but it was always painted. Modern terra cotta glazed colors will endure, and the Philadelphia Museum of Art will be when complete as nearly permanent as the inventive skill and experience of architects, sculptors, polychromists and ceramists can make it by bringing to bear upon its combined decoration and construction the inexhaustible resources of modern art, science and manufacturing.



AURORA, OR EOS, HERALD OF THE DAWN, AND NOUS, REPRESENTING THE HIGHEST INTELLIGENCE OF MIND, FROM MR. JENNEW EIN'S PANEL.

NEW ARCHAEOLOGICAL DISCOVERIES IN SOUTHERN ABYSSINIA

By FATHER ROMAIN BUTIN, S. M.

Acting Director, American School of Oriental Research in Jerusalem

ON February 12, the American School was fortunate to have as its guests Père Bernardin Azaïs and his companion, M. Roger Chambard. M. Chambard is attached to the French Consulate of Addis Ababa. By special permission he accompanied P. Azaïs, a Capuchin missionary, during his first and fourth archaeological missions to southern Abyssinia. When P. Azaïs and M. Chambard called at the American School, they were on their way to France where they will publish the results of their work. In the meantime, P. Azaïs has given the Acting Director of the American School a copy of the report with full permission to utilize their material prior to their own publication.

The first journey Father Azaïs made was in 1922, and the last was completed last November. During the first he visited the Province of Harrar. About 60 miles south and west of the town of Harrar, he discovered thirty-four dolmens of the same type as those found in Europe. In one case the tomb was examined and contained besides human remains, potsherds, a silver ring, a large metal bead and three large stone beads apparently for a necklace. In the same region, west of Harrar, he found fourteen stelæ with Arabic inscriptions, some in Cufic and others in the ordinary script. Some of them go back to the XIIth or XIIIth century and prove that the province of Harrar was converted to Mohammedanism at a comparatively early date.

West of Harrar also, at Dazza Tuli, eight tumuli were discovered; they are about 25 m. high and have a circumference of 250 m. at the base with a winding path to the top. They form a perfect cupola and are almost uniformly found on the top of a mountain, itself in the shape of a dome. This, according to P. Azaïs, is not mere accident but shows a positive design on the part of the builder. Many think that the pyramid is a development of the dome-shaped tumulus. Could it be that here in southern Abyssinia we find the actual prototype of the pyramid?

In the country of the Annias, sixty miles south of Harrar, a curious monument was examined, which P. Azaïs had already visited while a missionary among the Gallas. On the side of a precipitous cliff is a large staircase made of rough stones polished by usage and rains. This staircase leads to a terrace 15 x 10 meters, eighty m. above the foot of the cliff and reached by a road cut in the solid rock. On this terrace, which is about the middle of the cliff, three doors open; the two at the sides are walled but the middle one leads through another staircase inside the rock to a rectangular chamber to which air and light are admitted from the top of the cliff through two slanting shafts. The purpose of this monument is not clear; only more systematic examination and excavation can throw light on this problem.



AREA OF PHALLIC PILLARS NEAR ALATA, SIDAMO.

The last three expeditions were all in the region of the great lakes and naturally complete one another, the final one (1926) lasting six months and traversing a very difficult country under torrential rains for four months out of the six. Leaving Addis Ababa, the explorers visited first the province of Guraghe, where they discovered what they call menhir-statues. These are large upright slabs roughly representing a human figure, resembling similar menhirs in southern France. Some are male but most are female. The male representations are usually carved on the slab in a very coarse manner, but the female are very elaborate and covered with various ornaments in relief. On the back hangs a long plait

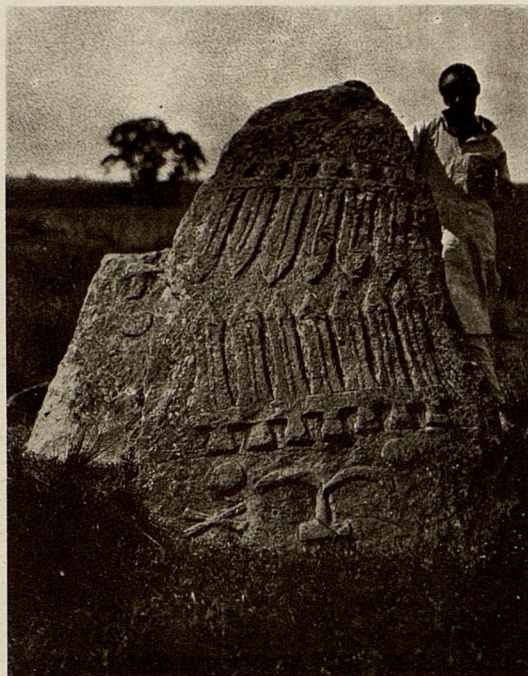
of hair. The same type occurs in Mediterranean art. M. Bénédite in a letter to P. Azaïs has no doubt about the similarity and says that they are linked "with the Mediterranean civilization, prehistoric, prehellenic, Minoian and Mycenian". He wonders how this civilization could have penetrated so far down into Southern Abyssinia, and further suggests that the Egyptian hieroglyphs might be derived from these ornaments. Such menhir-statues are found at Silte, at Adber and at Baltshi-Sagara. They form part of a necropolis; two of these statues were thoroughly excavated, but it was found that both tombs had been robbed at some unknown period. Pottery of a neolithic type was found.

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In the neighbouring province of Soddo, which was visited next, P. Azaïs found at Tya one hundred funerary slabs, as much as three yards high, without inscriptions but ornamented with daggers in relief. Sometimes there is but one dagger, at other times there are several in a row or in two rows facing each other; they are uniformly accompanied by two large dots in relief and by a curious symbol resembling a Greek Upsilon. This last sign is sometimes doubled or accompanied by another symbol like a Greek Khi, or by another resembling a Greek Eta lying on the side. At Gareno, P. Azaïs found twelve more and at Gayet several hundred. This type of funerary slab is peculiar to Soddo and is not found even in Guraghe. A relationship exists between these dagger slabs of Abyssinia and those found in Spain and Italy along with menhir-statues. They often surround a tumulus and undoubtedly mark a necropolis. The mode of burying was, however, very peculiar; in the one tomb examined the body was so flexed upon itself that it did not occupy more than half a yard.

Another kind of stela found in Soddo consists of a human figure covered with geometric designs and perforated by two holes, themselves covered with such designs. The position of the holes is very arbitrary and it is hard to know what they represent, but in some specimens there is little doubt that they are meant for the free space between the arms and the body proper.

At Dimbo Dara, in the same province, a peculiar tumulus was found, surrounded by a semicircle of hemispherical sandstone blocks, about one yard in diameter. The entrance is marked by two conical stones set point downward. Ten yards in front of the semicircle and in line with these two,



BAGGER STONE AT TYA, SODDO.

two more such cones probably marked the beginning of an alley leading to the mound. Similar tumuli were found at Wenni and Matara in the Abado region.

From Soddo the explorers went south, passing between Lake Zouai and Lake Langano, and entered the Arussi country. At Munessa, they came upon an old Mohammedan cemetery with the usual twin stones at the head and foot of each tomb. They excavated one, which they found to have been waterproofed by a thick envelope of clay. It contained a brachycephalic skull with distinctly prognathous jaws. Nearby, they found a small sarcophagus 1.10 m. x 70 cm. x 15 cm.

Several days journey took them to the Sidamo country, already visited in 1925; then along the east side of Lake Margherita, around Lake Chamo, back past the west side of Lake Margherita to Sodda and through the province of

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Wallamo to Addis Ababa. The furthest point south reached was near the 5th degree of north latitude. In all this region around the lakes—at Alata, Watadera, Aberra, Derasa, Goro, Buq-gisa and Wallamo—they discovered numerous phallic pillars of a peculiar type, very crude and realistic, resembling those found in the forests of Yucatan, Mexico. These pillars exist all around Lake Margherita in large numbers. The explorers counted over 11,000. Their size varies from about one meter to eight meters; the diameter exceeds two meters in some of them. Most of them are round but some are parallelopipeds with small cups out on the sides. They stand in groups close to one another, some of the groups containing as many as 1500. They



MENHIR STATUE AT SILTE. FRONT VIEW, FIG. 1.



MENHIR STATUE AT SILTE. REAR VIEW, FIG. 2.

never occur in the villages nor in the valleys, but are invariably found in beautiful and picturesque places from which a view can be had of Lake Margherita; high hills and mountain spurs easily defended are preferred. Many of these pillars are ornamented with symbols which P. Azaïs rightly thinks are solar and astral symbols. The cruciform representations are turned to the south, i. e., towards the Southern Cross, which, it seems to me, they must represent. The others are all turned to the east or west. From the drawings, it seems to me that they must represent the sun and

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stars at the various stages of their daily (or nightly) course, rising in the firmament, and setting; perhaps even, the sun in its nocturnal subterranean passage from west to east. The line single or double on the plane of the disc is the horizon; the disc is, of course, the body of the sun itself. Perhaps the signs representing the setting sun are turned to the west, those representing the rising sun, to the east, while those of the full orb may be either east or west. P. Azaïs, however, is inclined to think that this is not always the case. He will verify that more accurately in some future exploration, for other explorations there will be. The eleven thousand pillars so far numbered are probably only a comparatively small part of the phallic pillars in that region. He was told of many more areas which he had not the time to visit. In some cases, the Egyptian cartouche seems to find a parallel. We are only at the dawn of Abyssinian systematic exploration, and the future may have many surprises in store for us.

Near one of these areas, the explorers made what they call a sensational discovery. At Buqqisa, in the Goro country, they found four statues resembling in a striking manner the famous neolithic idol or Ægean divinity guardian and

protectress of the tombs. This goddess has been found in the Ægean archipelago and neighboring mainland as well as in Asia Minor, and it is surprising to find it also near the equator. In one case the mouth is completely lacking, as befits the speechless inhabitants of the graves; in two other cases, the mouth is open as it is in death. The head of the fourth statue is unhappily lost. The greater part of the body of all four is covered with geometrical designs, recalling the bandages of an Egyptian mummy. Excavations under one of these statues re-



GODDESS OF BUQQISA, No. 1.

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STATUE DE BUQQISA, No. 2.

vealed the presence of human remains, thus showing that near the sacred place marked by the phallic pillars there was a necropolis under the protection of the speechless divinity. The importance of these discoveries cannot be overestimated: not only do they add a new chapter to our knowledge of pre-history, but may oblige us to modify some of our views as to the origin and extent of the Mediterranean and Egyptian civilizations.

All along the route, P. Azaïs and M. Chambard made various linguistic and

ethnological observations, paying special attention to the customs and characteristics of the people of the Konso. Incidentally, they identified thirty-eight new species of fossil shells and gathered information on the flora of the country. In the field of natural history, we may naturally expect more from the expedition of the University of Chicago, now in the field.

In the province of Gamo, west of Lake Margherita, P. Azaïs visited some ancient churches antedating the Musulman invasion, especially that of Birbir Maryam. The church treasury contains several interesting manuscripts and ancient liturgical vessels. It is known that at the time of the Moslem invasion the Christians hid the treasures of their churches in caves which were walled up and dissimulated in various ways. The explorers ascertained the existence of such closed caves, which they will investigate in the near future.

The creation of a museum at Addis Ababa would greatly favor the preservation of those objects and facilitate their study. Few scholars can afford the time to go to southern Abyssinia to examine them *in situ*, nor would most of them be able to undergo the hardships of a long journey through the jungle under torrential rains with the constant danger of sickness. It is to the honor of the present government of Abyssinia that it contemplates the creation of a Department of Antiquities and the erection of a museum at Addis Ababa, which can easily be reached by rail from the port of Djibuti in two days. We all hope that Empress Zauditu, Ras Taffari and P. Azaïs will be successful in carrying out their proposed plan.

AMERICAN NAIL-LESS HOUSES IN THE MAYA BUSH

By OLIVER G. RICKETSON, JR.

IN January, 1926, I sailed from New Orleans for Belize, British Honduras, with orders to proceed to the center of the Petén district of Guatemala, and, having arrived there, to dig a well and build a house—work incident to the exploration and examination of certain Maya Indian ruins. In order to carry out the scientific investigations satisfactorily, a site had first to be made habitable in this totally unoccupied jungle, and not only is the jungle destitute of permanent inhabitants, but it is also without any surface rivers or any water supply other than occasional stagnant pools of rain water, which vanish during the dry season. It was my task to engage a *cuadrilla* (gang), the only labor available being *chicleros** of very mixed blood—Spanish, Negro, Indian, Syrian, Hindu, and European all rolled into the most extraordinary hodge podge—and proceed four days into the wilderness, taking with me every necessary article, including food, for a four months' stay.

On February 8, with one other white man, I left the little frontier town of El Cayo with eight men and a pack-train of mules. In British Honduras the ration required by law is four pounds of salt pork and seven quarts of flour per week per man. This scarcely seemed adequate, so to it we added rice, beans, salt, sugar, tea and coffee, and, for our own use, canned provisions. Except for the game shot, the laborers lived entirely on those rations.

However, this article is not concerned with the vicissitudes of life in a waterless jungle—strange paradox—but with the construction of "bush" houses. We found that a perfectly satisfactory residence could be constructed with no tools other than machetes and axes. Even a hammer was superfluous, for neither nails nor wooden pins were used.

Of course, the first requirement was for temporary shelters, to be occupied during the four months' stay. A camp site was chosen; it would be more correct to say two camp sites, one for the white men and one for the laborers, for the amount of work that can be got from a *chiclero* is in direct proportion to the distance at which he is kept, physically and morally, by his *patron*. The men were assigned a piece of level ground, and the whole gang set to making a clearing. After this, each man built his own *champa*.

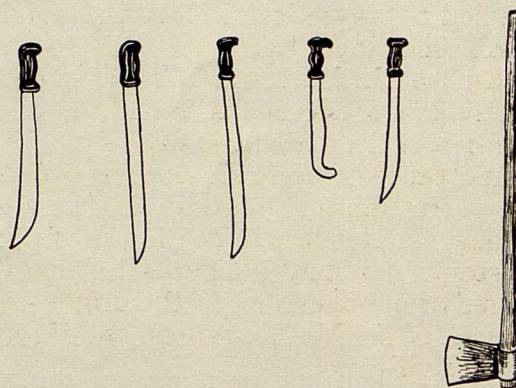


FIG. 1. DIFFERENT TYPES OF MACHETES AND TYPE OF AXE USED THROUGHOUT THE PENINSULA OF YUCATAN.

* Tappers, or "bleeders" of the sap of the sapote tree, from which chewing-gum is made.



FIG. 2. A *champa*, OR LEAN-TO, WITH A HAMMOCK SUSPENDED BETWEEN THE BOLES OF TWO TREES.

A *champa* is the simplest possible shelter. It consists of a horizontal cross-bar between two uprights. These uprights may be forked sticks stuck in the ground, or they may be the boles of two trees standing at a suitable distance apart. The cross-bar having been set in place, leaves of the *botan* palm are cut, the stems long enough to reach the ground when the leaf is laid over the cross-bar. Sufficient leaves are laid along the bar and back of it to insure shedding the heaviest rain.

Like everything else, there are good and bad *champas*. A good *champa* (Fig. 2) will have a rough frame-work at its back. This is set up by leaning some poles against the cross-bar, and tying to them one or more horizontal sticks. These are tied in place with *bejucos*, a general term applied to any vine, but in this case meaning a par-

ticular variety, extremely tough and flexible, which is used entirely in house construction. The leaves of the *botan* palm are then cut, first a row with short stems, and laid against the frame, stems on the ground. The next layer is cut with longer stems and laid higher up the side of the frame. Usually, three lengths of stem are sufficient, the last ones hanging well over toward the front of the *champa*. A well-made *champa* is high enough to stand up in, and long enough from end to end to swing a hammock in. The men were allowed a day to make their clearing and set up *champas*. In general they paired off in twos, one cutting poles and uprights, while the other cut leaves. An extra *champa* was set up as a kitchen, and all hands helped to set up another for the cook. At the end of the day, the two rows of shelters, opening

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toward each other, had an almost homelike look, each section containing all the worldly goods of its occupant . . . his hammock, his *pabellon* or mosquito-bar, his machete, and a little bag of spare clothes hung on a branch out of the damp and harm's way.

I have often slept in *champas*, and no better, drier sleeping quarters could be desired. However, a lean-to six feet wide by twelve long affords little room for anything more than sleeping, so on the following day all hands were turned out to build a *galera*. This is a shed-like structure, and, although simplicity itself, it is far more complicated than a *champa*. We decided that our *galera* should be fifteen feet wide and twenty-five feet long. Inez, our *capataz*, looked rather blank when we told him this, so we had to translate the order into five *varas* wide by eight *varas* long. Then his wrinkled ebony face broke into a prognathous grin.

"*Si, senor!*", he said, and forthwith the machetes went chop, chop, chop through the light stuff.

Room having been made in which to swing an axe, the larger trees were felled, and men were despatched to cut posts. Six of these were required, each ten feet long. Their upper ends were trimmed to a blunt, flat point, and then V-shaped notches cut with machetes. (Fig. 3, A and B.) The posts were then set up in holes dug by machetes, one post for each corner and one on either side at the midpoint. Three *vigas*, or beams, were laid across the long axis of the house, between each pair of posts, and two other beams laid on these at right angles to the first set, one on either side. These were securely lashed in position with *bejuco*. Two more beams were added, one at either end, parallel with the first set of three, and our *galera* was now as far along as

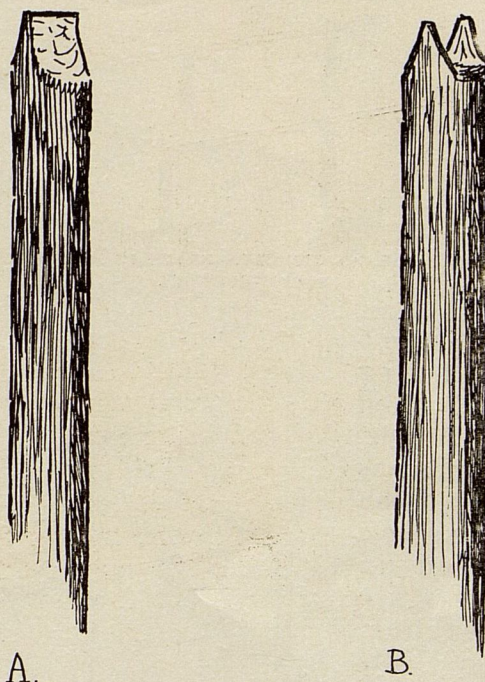


FIG. 3. TWO STAGES IN THE CUTTING OF MOSQUEROS OR NOTCHES IN WHICH TO LAY HORIZONTAL SUPPORT-BEAMS.

in Fig. 4. The two beams last added are the *vigas de la culata*, literally "beams of the rear end".

The next procedure was the placing of the ridgepole with its supporting timbers. Once this was in position, the "rafters" were fastened down both sides and over either end, with butts notched and laid over the ridgepole, where they were tied into position with *bejuco*. The one remaining structural feature, the *barrillas*, or parallel bands of horizontal sticks tied to the rafters (as indicated in Fig. 5 by solid black), carry the palm-leaf with which the house is thatched.

To watch an adept thatcher at work, one would believe it the easiest job in the world, but it is not so easy as it seems. The leaves are stemmed on the ground by a helper, who also piles them around a rope or *bejuco* with a toggle at the bottom, tearing the leaf

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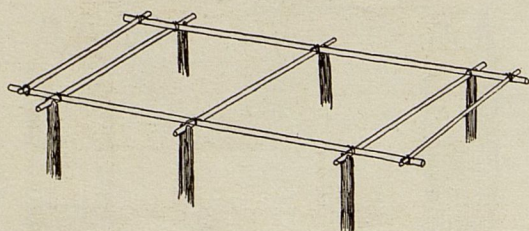


FIG. 4. THE SUBSTRUCTURE READY TO RECEIVE THE ROOF-STRUCTURE.

open so that it catches on the toggle. As many as desired can thus be pulled up by the thatcher, who lifts them off one by one, tearing the leaf into three un-

equal parts. The main central part of the leaf passes over *barilla* No. 1, and under *barilla* No. 2, the two strips at either side, however, being passed above the latter *barilla*. The leaf is then jammed down to the stem, or nearly to it. The process is illustrated in Fig. 7.

A good thatch, closely packed, is absolutely rainproof and will last three to five years, the length of time depending on how closely the *barillas* are set and how badly the leaf becomes the prey of worms, which can make very short work of any thatch.

With the thatching completed, our *galera* appeared as in Fig. 8, and had we decided on a type of structure that would insure more privacy, pole walls could have been added. This would

have given us a residence such as that shown in Fig. 9, which, because it lacks windows, is labelled a *bodega*, or warehouse, instead of a *casita*, or dwelling. Being alone in the wilderness, we had no need of privacy other than that provided by our natural surroundings, and we lived in our *galera* without once feeling that its wall-less sides exposed

us to curious human eyes. No doubt many prowling eyes peered at night at the gleam of our hurricane-lamp, but since a cat can look at a king, we felt no sensations of outraged

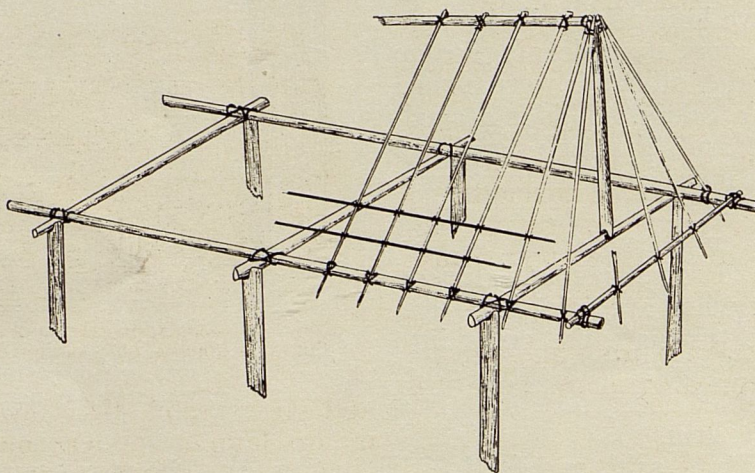


FIG. 5. DIAGRAM SHOWING THE ROOF-STRUCTURE IN PLACE ON THE SUPPORTING SUBSTRUCTURE.

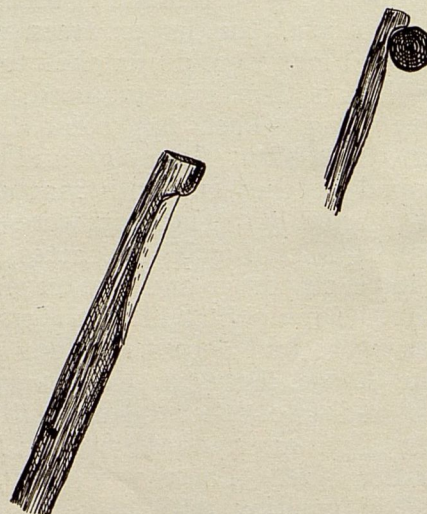


FIG. 6. THE LIGHT RAFTERS SUPPORTING THE *BARILLAS* ARE SMOOTHED AND NOTCHED ON ONE SIDE BEFORE BEING LAID OVER THE RIDGE-POLE AND LASHED INTO PLACE.

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modesty due to the stare of a passing jaguar or two.

When our temporary quarters had been set up as described, various odd jobs had to be done before the construction of the permanent house could be undertaken. Not the least of these was making a clearing, for all trees, whether six inches or four feet in diameter, had to be felled in the area selected for the house. The importance of this was emphasized later, for we left a very magnificent *chico sapote* tree about fifty yards from the house. This monarch, one of the hardest as well as most beautiful of trees, looked as though it possessed the strength of Gibraltar. We left it partly on account of its beauty, but mostly because of the difficulty of chopping it down, a job that would take an excellent axeman at least eight hours—alone in its grandeur it appeared more beautiful

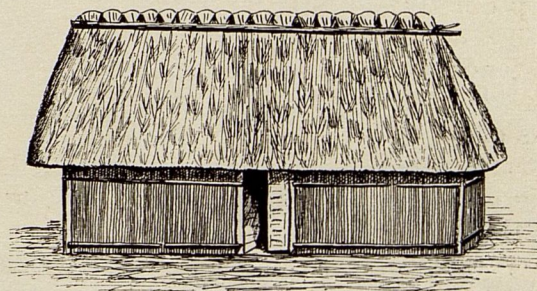
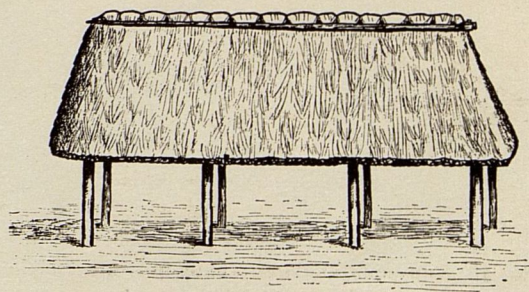


FIG. 8. A GALERA, OR SHED-LIKE STRUCTURE.
FIG. 9. A BODEGA, OR WAREHOUSE.

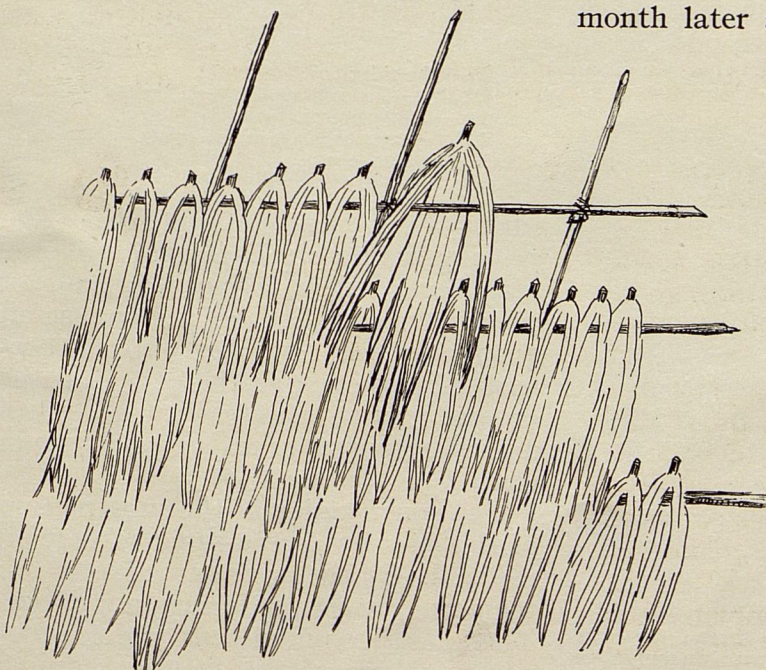


FIG. 7. DIAGRAM TO ILLUSTRATE THE METHOD OF THATCHING. THE PALM LEAVES ARE "HUNG" OVER THE HORIZONTAL BARRILLAS EACH TIER OVERLAPPING THE TIER BELOW MUCH AS DO OUR OWN SHINGLES.

and more solid than ever. But a month later a sudden thunder squall caught it and tore it, roots and all, from its precarious hold in the shallow soil, and with three hundred and sixty different directions in which to fall, it chose to fall directly toward the house, then nearing completion, and only failed to accomplish its evident purpose by the narrow margin of a dozen feet. It cost us two days' labor with one *machetero* and two axemen to remove it from the space we had carefully levelled and stumped for the erection of our kitchen.

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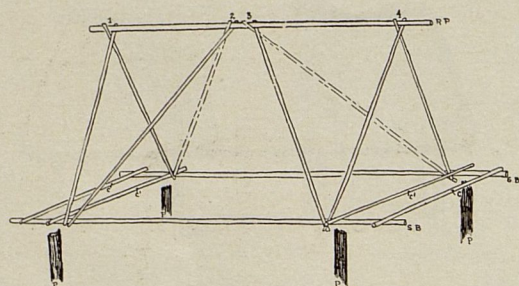


FIG. 10. THE HEAVY RAFTERS (TIJERAS) IN POSITION AND SUPPORTING THE RIDGE-POLE.

- 1, 2, 3, 4.—Heavy rafters (*tijeras*).
- R. P.—Ridge-pole.
- P, P, P, P.—Supporting posts, indicated.
- S. B.—Support-beams.
- C, C, C', C'.—Culata beams.

The permanent house we erected is thirteen *varas* wide, by fourteen long, very nearly square. It faces the east, with a *corridor*, or porch, eight feet wide, on that side, and another on the west side twelve feet wide. The latter porch serves as a dining room, and faces the kitchen, a separate building twenty feet away. The main body of the house, between the two porches, is divided into three rooms, the two on

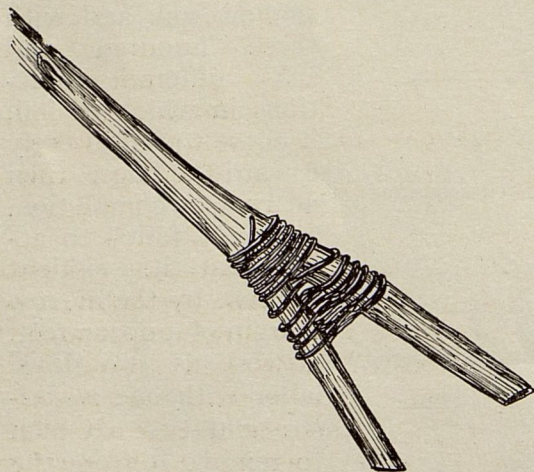


FIG. 11. HEAVY RAFTER, CALLED TIJERA (SPANISH, MEANING 'SCISSORS'), SHOWING THE WRAPPING OF BEJUCA TO PREVENT THE SPLITTING OF THE FORK UNDER THE COMBINED WEIGHT OF THE ROOF-FRAME AND THE THATCH WHEN PLACED ASTRADDLE OF THE SUPPORT-BEAM.

the ends, 20' x 16', to serve as bedrooms, and the narrow central room, 20' x 10', to serve as a *bodega*, or store-room. The ground plan is given in Fig. 14. A square structure gives the greatest usable space beneath the smallest roof area. The wide west porch, if enclosed, would provide extra storage space, or two additional rooms, if either were required. The central location of the *bodega* makes that room a buffer between the two bedrooms, in-

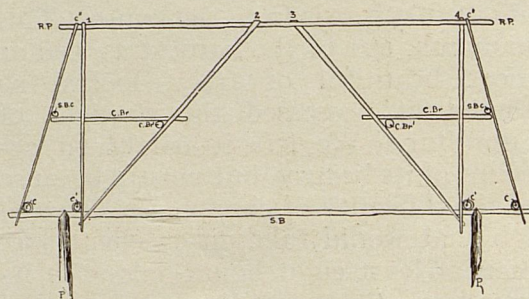


FIG. 12. PROFILE SILHOUETTE OF THE FRAME, SHOWING THE TOPS OF THE SUPPORTING POSTS, P, P.

- 1, 2, 3, 4.—Rafters (*tijeras*) supporting the ridge-pole.
- R. P.—The ridge-pole (*cavallete*).
- C, C', C'', C'.—The culata. Cf. C, C', in Fig. 13.
- C. Br.—Culata braces.
- S. B. C.—Superior beam of the *culata*.
- S. B.—Support-beams.

sureing their occupants a little more privacy than a single pole wall allows, and also renders it more difficult of access for unauthorized persons, as all goods removed, even by duly authorized persons such as the cook and the *capataz*, must necessarily be taken under the very eyes and ears of those in charge.

The construction of the substructure of this house was the same as that already described for the erection of our temporary *galera*, differing only in size. The *galera* required only six ten-foot posts, whereas the house required twenty-two. In the latter, instead of two lines of three posts, as in the *galera*,

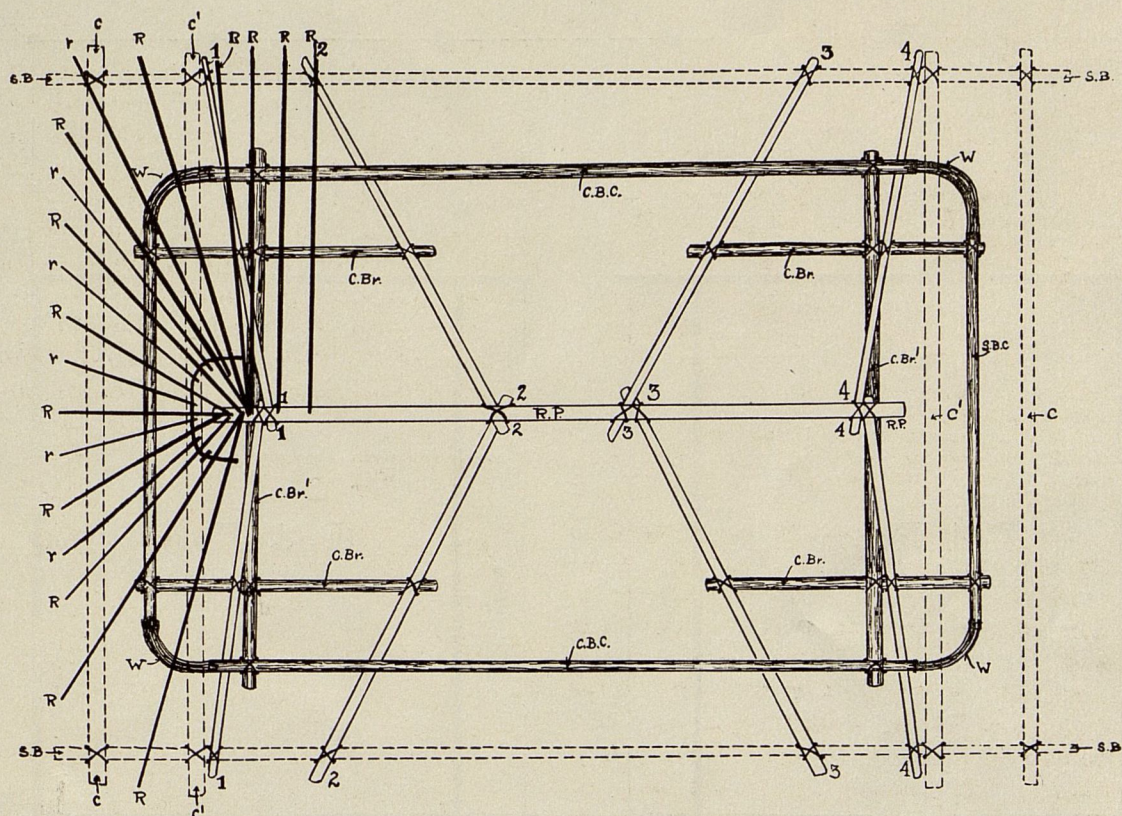


FIG. 13. VIEW LOOKING DOWN ON THE TOP.

1, 2, 3, 4.—Rafters (*tijeras*) supporting the ridge-pole.

R. P.—Ridge-pole (*cavallette*).

C. B. C.—Connecting beam of the *culata*.

C. C.—Outer beam of the *culata*.

C', C'—Inner beam of the *culata*.

S. B.—Support beam.

C. Br.—*Culata* braces.

R.—Longer rafters from the ridge pole to the eaves.

r.—Shorter rafters from the *corona* (which is supported under the ridge-pole on the R rafters) to the eaves.

W, W, W, W.—Rounded corners between the superior beam of the *culata*, made of bent withes in bundles.

S. B. C.—Superior beam of the *culata*.

The supporting substructure in dotted lines; the ridge-pole supports in black line; all portions of the upper *culata* shaded; rafters and *corona* in solid black.

there were four lines of five posts each. The ridgepole was erected over the midline between the two inside rows of posts. This left two outer rows, the porch lines, one of which was eight feet and the other twelve beyond the house walls. The easiest thing in the world, of course, would be to hang rafters from the ridgepole straight to the porch line, and with lumber and nails carpenters think nothing of doing

it. But where you have to cut down a tree and use the whole trunk of it, by the time you get a tree long enough to reach the forty feet you also get a lot of unnecessary weight in the butt. Not only is this weight a disadvantage in the actual building, but, together with the length, it is a decided disadvantage when carrying the tree in. Every stick cut has to be brought to the house-site on a man's back through

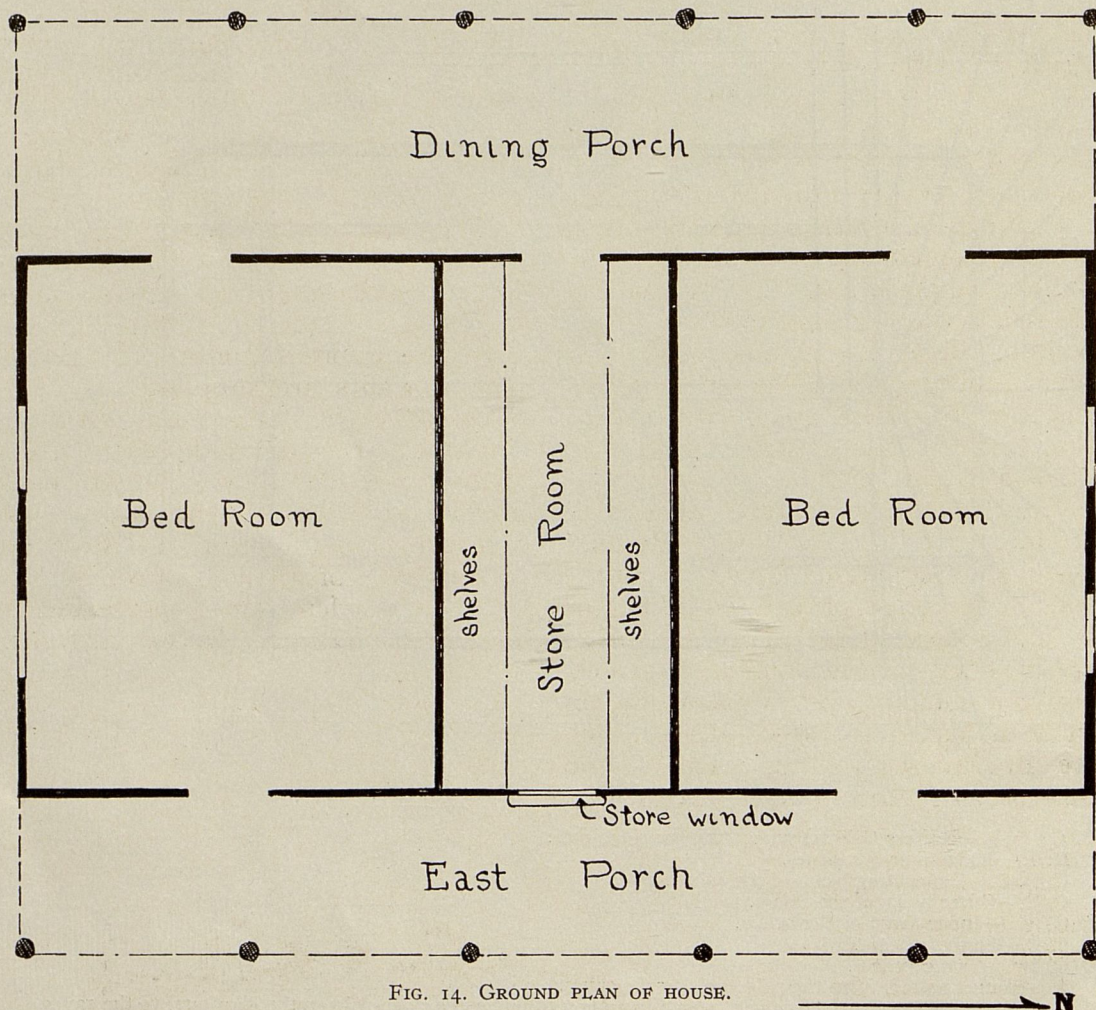


FIG. 14. GROUND PLAN OF HOUSE.

a dense jungle where it is necessary for him to chop his way with a machete. So the disadvantages of long, heavy rafters are got around by using two shorter ones, and midway between the ridgepole and the eaves are set up *vigas de la culata* to support the double set of rafters.

These *culata* beams are held in place by horizontal supports, three at either end. Halfway between the substructure and the ridgepole at either *culata*, two horizontal beams are tied to the rafters supporting the ridgepole, the

ends protruding the correct distance (Figs. 12 and

13, C. Br.). Across these is tied the true *viga de la culata* (Figs. 12 and 13, S B C). On either *culata*, the structure is now ready to receive the light rafters running from ridgepole to eave in two pieces, but similar supporting beams must be placed on the sides as well. The frame now consists of two rectangular systems, one to form the eaves, the other, midway

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between eaves and ridgepole, to carry the light rafters (Fig. 13, R and r).

It is essential that the superior *culata*—the shaded portion in Fig. 13—be joined at the four angles with rounded corners, to facilitate tight thatching. For this reason the beams are not joined one with another, but the joining is made by lashing a bundle of green withes to the end of one beam, bending them one by one, and tying their other ends to the other beam. These withes, bent green, dry in position and become as strong as a solid piece of wood.

Only one more feature remains to be mentioned: the *corona*. Because the rafters spreading fanwise from the ends of the ridgepole are too numerous to find lodgment, as many as can be are crowded together on the ridgepole, and in a semicircle below another green withe is lashed to those rafters which are already securely in place. From this *corona* further shorter rafters (Fig. 13, r r r) are run to the *culata* beams and thence to the eaves. When the frame is completed, the thatch is applied.

I have used the expression "pole-wall"; this, as the name implies, is merely a series of poles—usually the trunks of the *escoba* palm, which are very straight and scarcely tapering—placed vertically side by side, the butt buried in the floor and the tops lashed together. The wall is further strengthened by top and bottom stringers (Fig. 9) placed on the outside. Win-

dows, being merely openings cut in such a wall, need only chopping and lashed-in sills to reinforce the loose ends of the poles. Shutters are an unheard-of luxury in the bush, though boards taken from a packing case may be nailed together and hung on hinges; nearer civilization such shutters are sometimes indulged in by the more progressive citizens.

Bush comfort is complete if the elemental wants are supplied. A cloth hammock serves as bed and armchair. The simplest shelter suffices, if it keeps off the torrential rain, and only in semi-permanent camps do the *chicleros* indulge in the luxury of a bush stove for cooking, one of which is shown in Fig. 15. The wooden frame is protected by a bed of *sac-cab* (Maya, literally,

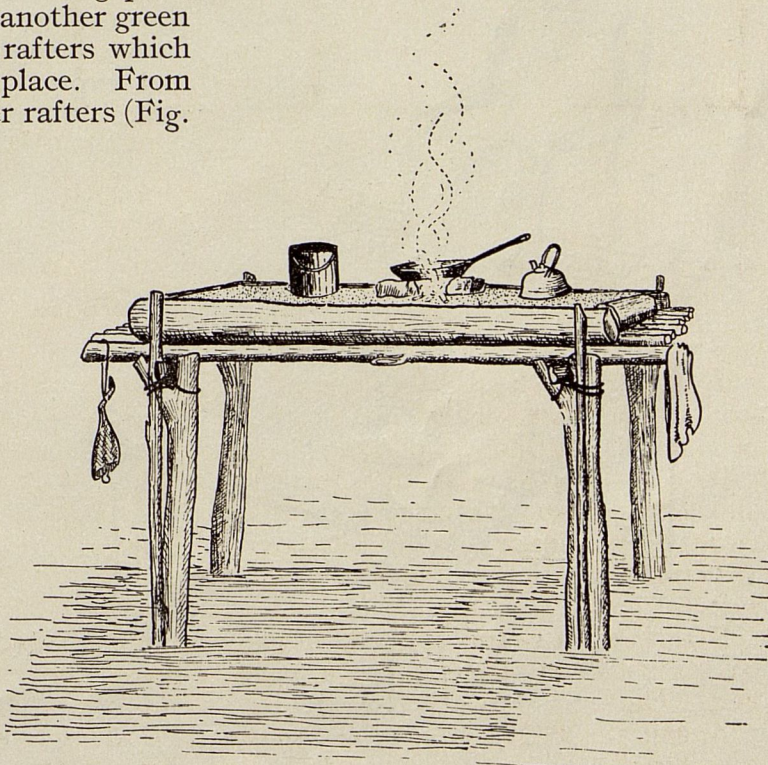


FIG. 15. A BUSH STOVE. THE FIRE IS BUILT ON A BED OF SAC-CAB (LIME-STONE MARL), FIRST WETTED AND THEN PACKED HARD.

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"white earth"), first wetted and then packed hard. This *sac-cab*, or limestone marl, hardens as does our plaster and may be used with excellent results for floors. If burnt, as it was by the ancient Mayas, it becomes a plaster of the first quality and may be used for stucco decoration. In many Maya ruins where the stucco has been somewhat protected from the fierce onslaughts of the tropical rains, it has endured exposure to the damaging effects of a hot, humid climate for a thousand years without appreciable deterioration.

One other piece of furniture has been evolved, the bush set-tub. Along the

Belize River this is apt to be a shallow, flat-bottomed basin, two to three feet in diameter, made of one piece of wood from the spur of a mahogany tree. But in the interior, where the transportation of such a large article on mule back would be extremely annoying, the washing problem is solved by building a sloping table of poles, with a raised ridge of split logs on three sides. Over this structure is spread a canvas *manta* (pack-cover), and water is poured into the basin so formed. It is an excellent solution of an otherwise difficult problem, for in a country without springs or streams it is obviously not desirable to wash clothes in the same pools which supply the drinking water. I am personally convinced, however, that the average native has not refrained from this practice for sanitary reasons, but simply because it is foolish to try to wash garments in a mud-hole and expect them to come out in a wearable condition. Dogs and humans

bathe in the water-holes; mules, whole packtrains of them, wade into the water knee-deep, fouling it until even the hardiest of *chicleros* shrink. Thirst, however, is a great leveller, and even the proudest throat is ultimately only too glad to drink the tea-colored liquid that is called water after most of the mud and wigglers have been strained from it.

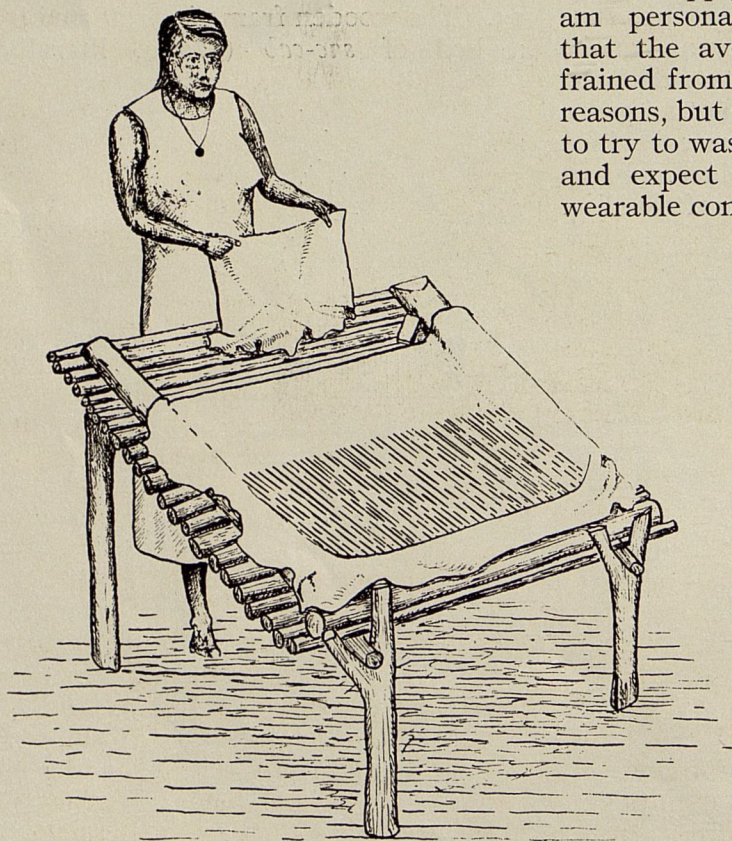


FIG. 16. A BUSH LAUNDRY.

THE ROUND CHURCHES OF BORNHOLM

By CLARENCE AUGUSTUS MANNING

In this description of the curious, half-military, half-ecclesiastical island churches which played so large a part in Denmark's mediaeval history, Professor Manning shows dramatically how the spirit of the Crusades influenced the north and left a permanent impress upon both people and architecture in the Baltic.

AMONG the curious remains of the Middle Ages perhaps no group of buildings is more worthy of interest than is the series of round stone churches on the island of Bornholm. This island, now belonging to Denmark, has had a varied history. Located to the east in the centre of the Baltic Sea, it commanded the trade routes between Sweden and the eastern and southern shores, and to it converged many of the routes that the ships of the ancient Hanseatic League took on their voyages to and fro.

This gave the island an importance which we might hardly suspect and exercised a striking influence on the development of the religious and civic life of the people. The twelfth century

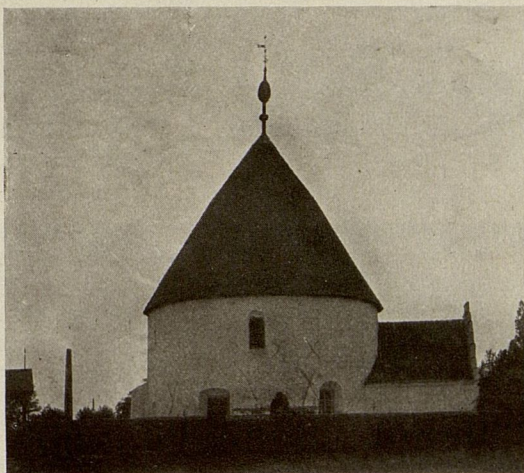
witnessed many severe conflicts in Scandinavia. The investiture quarrel was shaking these countries as it did many others, and the shifting of the balance of power in political affairs led to many new foundations in the religious world.

Absalon, Archbishop of Lund (now in Sweden) from 1187 to 1201, was not likely to lose any opportunities for strengthening his own power. He was a true incarnation of the Middle Ages,

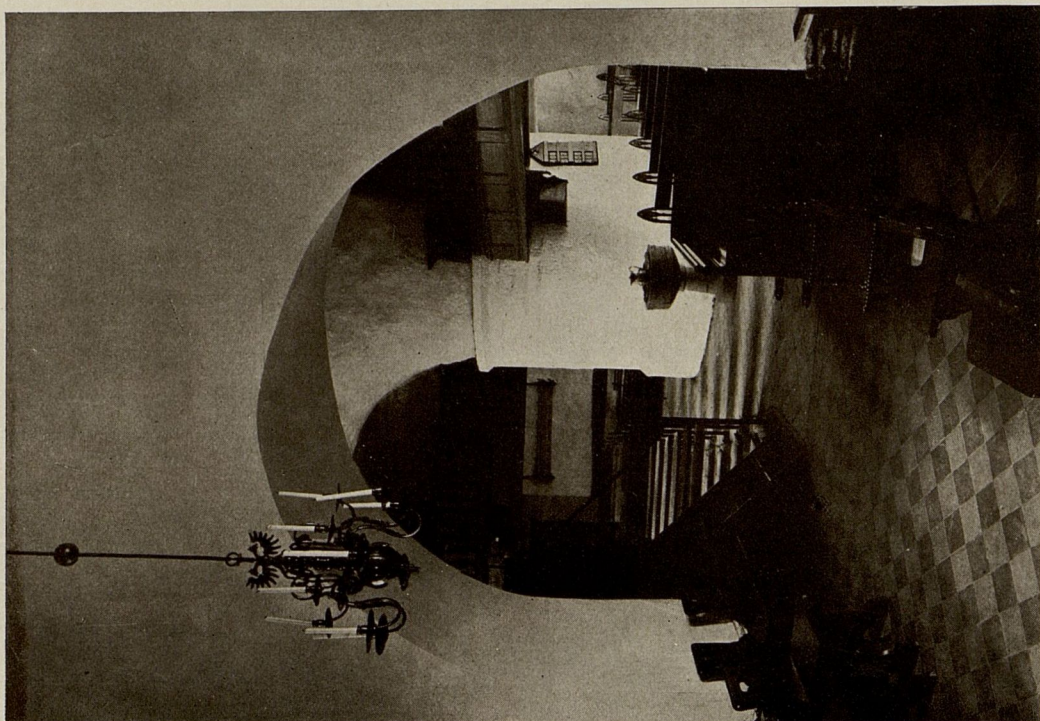
a bishop who was as ready with the sword as with the crucifix, and he took a prominent part in the controversies of his time. It was during his service as Archbishop that the first two of these round churches were built on Bornholm, which formed part of his diocese. His successor Anders Sunesen (1201-1224), continued the same policy and built the two others, the Church of St. Laurentius, or the Østelarkirke, being the largest and most elaborate of the group.

These buildings, of which the Nykirke is probably the oldest, were all constructed on approximately the same pattern. They were built of stone in a circular form with walls from three to six feet thick. This made them formidable fortresses

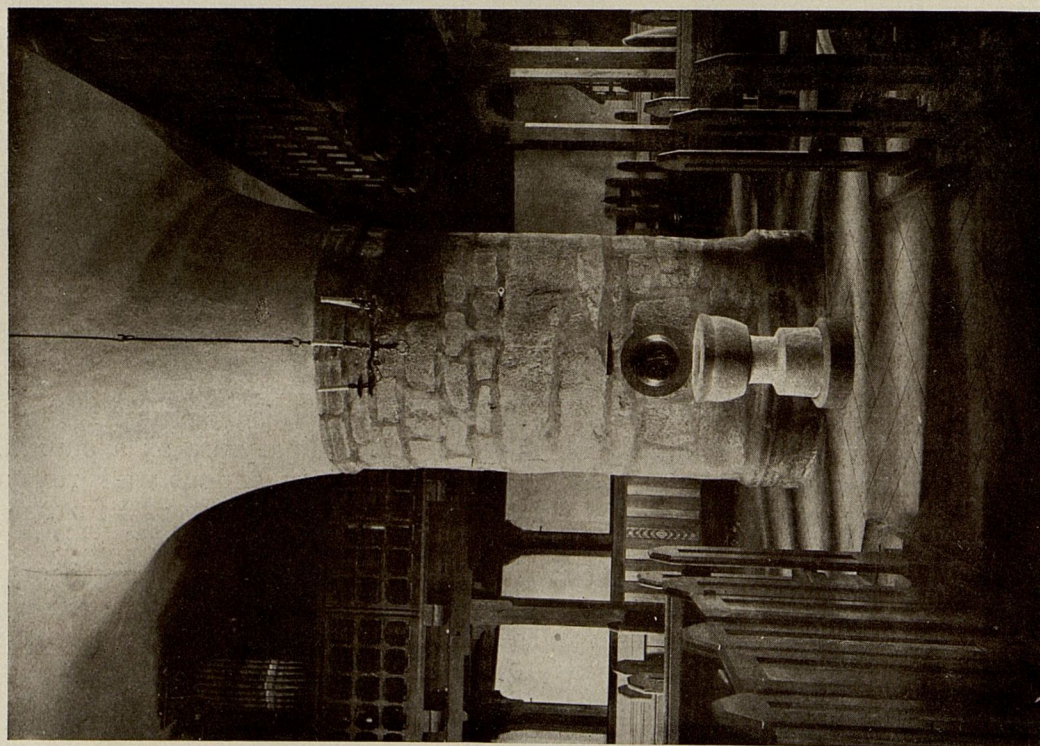
in the days before the use of gunpowder, and there can be no doubt that the good archbishops had this purpose in mind as well as the ordinary use as a church. Around these tremendous walls runs a wall like the outer bailey of a fortress, surrounding the churchyard and undoubtedly intended to furnish additional barriers to any attacking foe and an additional place of refuge for the citizens and their possessions in case of attack.



NYKIRKE



NYKER, BORNHOLM.



ALSKER, BORNHOLM.

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KASTEL, RØNNE.

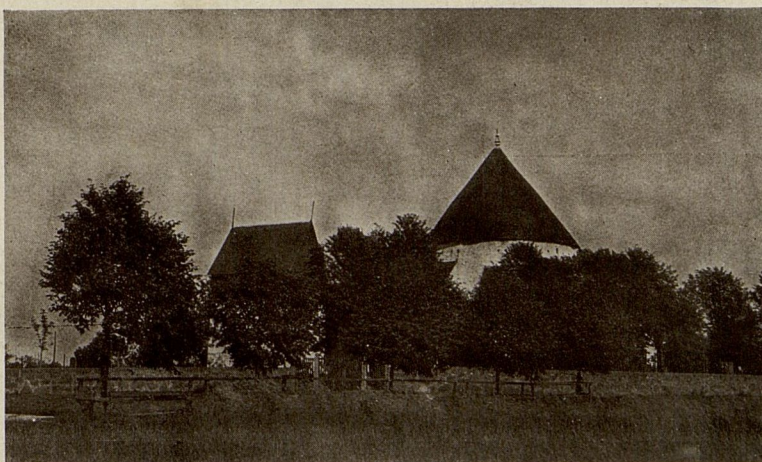
The church was constructed in two stories and the upper one shows clearly this dual function of the building. In the Østelarkirke access is had to this by a winding stairway in the wall. The second story consists of a great chamber or storehouse with a narrow passageway running around the building and with long and narrow openings—which can only be intended to serve as loopholes—peering out in every direction.

Below to the east is a little niche or chancel for an altar, which is perhaps of somewhat later date. At the west side of the building are entrances for the congregation, but the outstanding feature is undoubtedly the massive core of masonry within the church to support the second story. This consists of six great columns arranged in the centre of the structure with a mass of

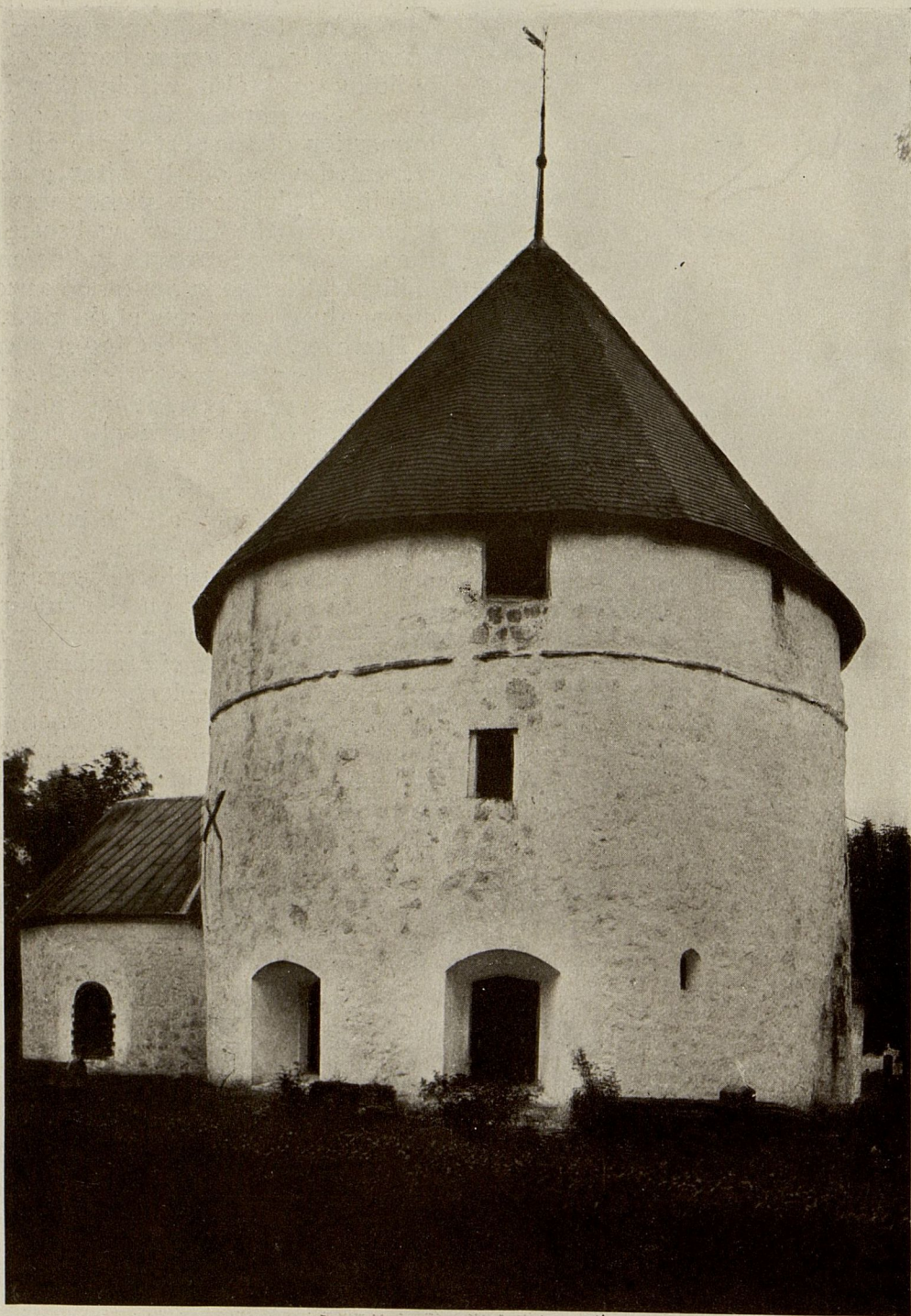
wall above them as a sort of frieze. The seats for the congregation are arranged in the outer border of the building and also within this inner core. The result is that only a small proportion of the seats have an uninterrupted view of the altar and the pulpit. This inconvenience was disregarded in the beginning because of the necessity for strength and defensive ability which the church-fortress needed during the trying times of the past.

However, with the coming of the next century the plain and striking bareness of the heavy walls was changed by the decoration of the frieze with scenes of sacred history. This was done under Italian influence, since Isarn, who became archbishop at the end of the thirteenth century, was of Italian origin and strove to leave some marks of his artistic spirit on the culture of the island. The drawing is rather rude and the work is done in reddish, greenish and yellow colors, which were restored in 1891 by Prof. Kornerup.

Later still bell towers or campaniles of a curious rectangular form were constructed, but these were largely separate structures. At times passageways



"THE BUILDINGS SEEM ALMOST MORE SECULAR THAN RELIGIOUS IN NATURE."



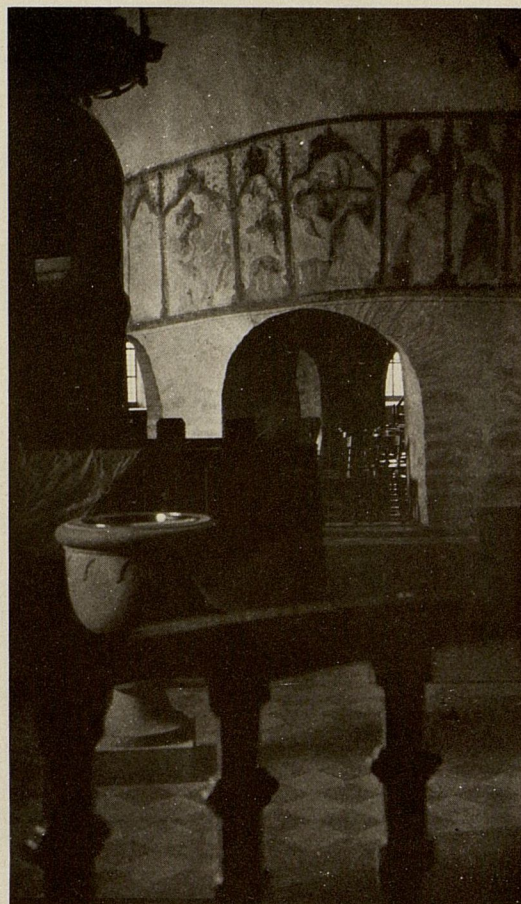
NY LASKER, BORNHOLM.

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connect the churches with other rooms or buildings, but even in these cases there is an atmosphere of severity and sternness which shows well the temper of the times. The buildings seem almost more secular than religious in nature, and it is hard at first sight to separate some of their details from those of the Castel at Rønne, which was constructed several centuries later for civic purposes only.

These round churches of Bornholm belong undoubtedly with the same tradition which built the 'Templars' churches in England, such for example, as that of St. Sepulchre at Oxford. They are the product of the spirit of the Crusades. In fact, the earliest churches on Bornholm were built almost simultaneously with the tidings of the fall of Jerusalem. Many other parallels could be cited for this type of Scandinavian round construction. We find traces of it in Finland, and passing further to the south on the continent there are many wooden churches in Poland which seem to be an adaptation of the same type, but this time in wood.

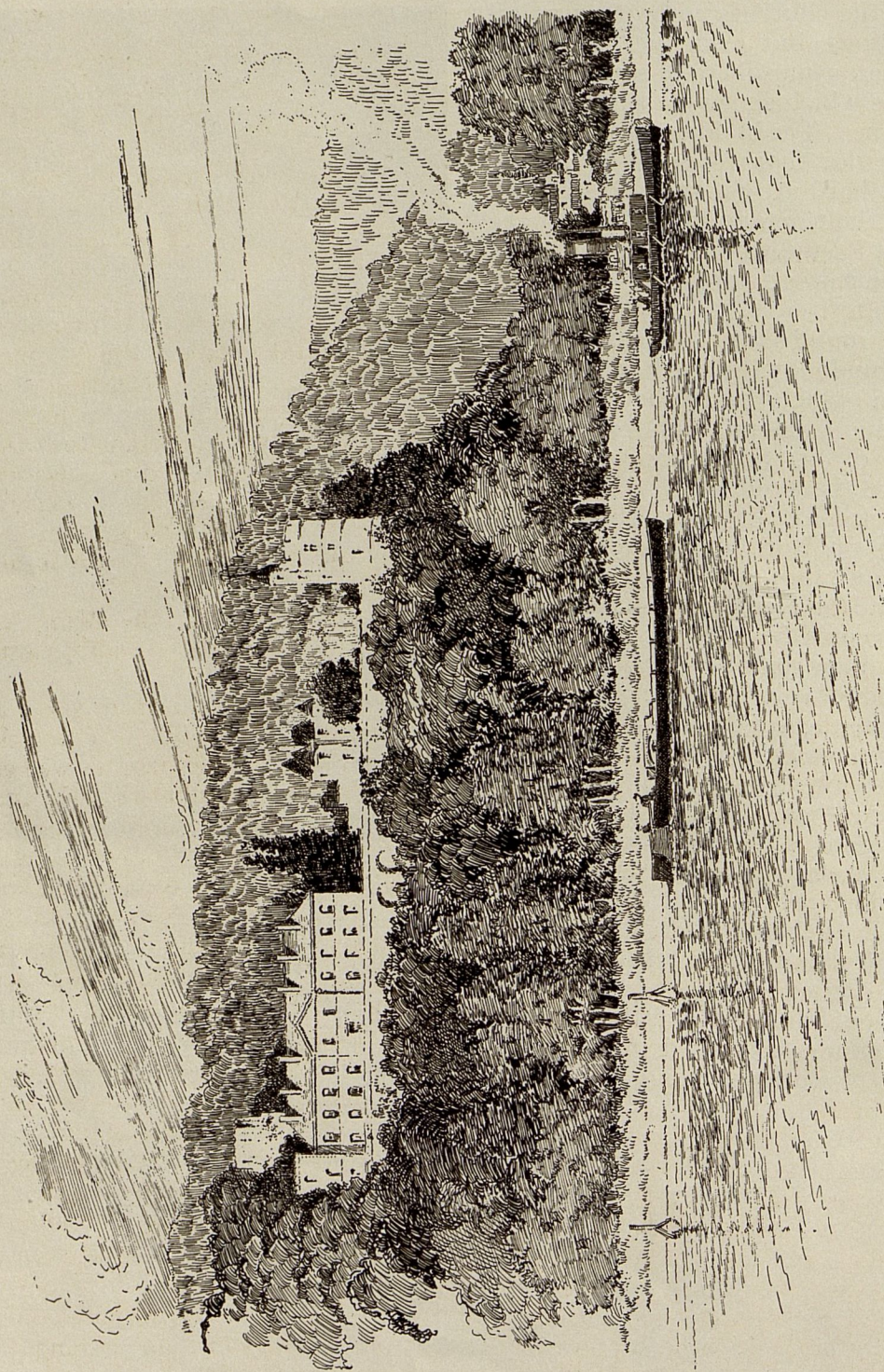
Bornholm is to some extent still isolated from the great currents of world movement by its geographical position. It therefore has a quaint air which hardly coincides with the active trade in dairy products it carries on at the present time. Nevertheless, this very aloofness has aided in the maintenance of the past and the round



THE DECORATIVE FRIEZE SHOWS ITALIAN INFLUENCE, A CURIOUSLY EXOTIC NOTE IN THESE STERN NORTHERN EDIFICES.

churches speak more eloquently than words of the stormy times when they were real fortresses, and the "Church Militant" was no mere figure of speech but the liveliest sort of reality.





THE CASTLE OF TANCARVILLE. PEN SKETCH BY RUDOLPH STANLEY-BROWN.

THE CASTLE OF TANCARVILLE

By KATHARINE STANLEY-BROWN

Illustrated by Rudolph Stanley-Brown

WE have wound our way through all the lovely sedgy curves of the Seine below Rouen; we have passed historic Jumièges and romantic Caudebec. Quilleboeuf with its tower lies behind us and Le Havre itself is not far off. On our right, high on its chalky cliff, imposing in its strong feudal position, is the castle of Tancarville. At its feet, on the edge of the level green marshes that line the placid river, is a tiny village, but the castle shines white and glistening upon its height. It dominates not only the sleepy little village below it, but the whole river.

The noble and quarrelsome race of Tancarville, hereditary Chamberlins of Normandy, inhabited the castle—founded by their ancestor Tancred in the tenth century—until 1320, when it came by marriage into the Melun family. The last of the Meluns was killed at Agincourt in 1415, and the castle was then successively owned by the families of Harcourt, Montmorency and La Tour d'Auvergne. It was burned by Henry Fifth of England in 1418, by Charles Seventh of France in 1435, and besieged by the Catholics in 1562. Part of its square twelfth century keep is standing and the remains of ten towers may be seen, but the rest of the castle is in ruins, a lovely ivied setting for the new eighteenth-century château built within the boundaries of the great walls.

But it was in the time of the Tancarvilles, powerful lords only a little less to be feared than Kings themselves, that the castle had its most exciting days. Rabel de Tancarville was so strong that not even King Stephen of England dared attack him without first assuring himself of the support of the French King. At about the time of the Norman Conquest Raoul de

Tancarville founded the nearby abbey of St. Georges de Boscherville, but that is almost the sole record of piety in the family. Early in the fourteenth century Robert de Tancarville had a furious quarrel with the Sire de Harcourt on the subject of a mill at Lillebonne which Tort de Harcourt, the Sire's brother, had seized. The duel was of such moment it was arranged that it should take place in the presence of the Kings of France, England and Navarre. The fighting was so terrific and the combatants so valiant that the agitated Kings hurriedly decided among themselves it would be a crime to lose either one of such men by death. "*Donc fut crié ho de par le roy de France*" ("Whereupon 'Ho!' was shouted on behalf of the King of France"), and the duel speedily came to an end.

Quieter days were in store for the great castle on the hill. The fair Agnes Sorel was to live there, as well as Dunois, Charles VI, Charles VII, and the homesick Mary, Queen of Scots, who spent a part of her childhood there. The Scotch speculator Law lived in the castle; the Duchesse de Nemours wrote her memoirs beneath the lime trees on the terrace. When the Duke of Albufera owned the castle, his guest Pierre Lebrun there wrote the tragedies of *Ulysse* and *Marie Stuart*. Memoirs, dramas, sieges, duels—the towers and turrets of Tancarville are indifferent as to what occurs within their shadows. Still dominating the landscape, still impressive though fallen low, they crown the cliff above the shining Seine. Only the wind and rain can they feel gently crumbling their whitened surfaces, only the warmth and sunshine helping to cover their shattered walls with glossy green black ivy.

NOTES AND COMMENTS

Dr. Arnold Sach of Heidelberg University, who is reported to have performed autopsies on hundreds of Egyptian mummies, lays the blame for decayed teeth—which are first noticed in mummies of kings of the later dynasties—to the development of night life and more or less riotous living along the banks of the Nile. Dr. Sach's investigations have convinced him that cancer, gout, tuberculosis and blood diseases were practically

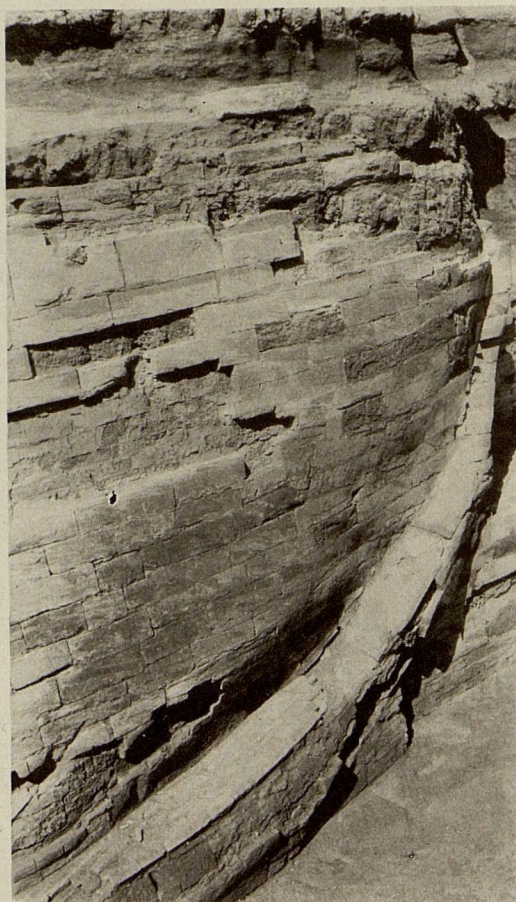
authenticated.—The same magazine reports the discovery in the Charente of a terra cotta vase containing no less than 14,000 pieces of money bearing the effigies of Henry IV, Louis XIII and Gaston d'Orléans. In the opinion of competent archaeologists who have examined the treasure and know the local history, the coins may have been part of the property of the ancient chapel of the Priory of St.-Georges de Rifaucou, demolished in 1771. Curiously enough the vase containing the coins is intact save for a scratch made by the discoverer's pick. A commission has been formed to classify and catalogue this rich find, whose value is indisputable.



THE SPHINX, RELIEVED OF ITS SHROUD OF SAND, IS EVEN MORE IMPRESSIVE THAN IT WAS BEFORE.

non-existent in early times, while leprosy, so often mentioned in the Bible, he is said to regard as undoubtedly a reference to some, at present, obscure disease, since the first well authenticated case of a leper does not occur until after the Christian era was well under way. Among the mummies examined, Dr. Sach reports that Rameses V beyond doubt had suffered from small-pox, and others displayed various physical imperfections, including club feet.

According to *La Science Historique*, road repairs recently made on the highway between Caen and Lion-sur-Mer, France, revealed eleven Merovingian tombs containing bones clearly of the same period and complete skeletons of more recent date. The Commission of Antiquaries of Normandy believes these sarcophagi date from the VIIth century, when they were first used, and that the more recent remains show they were again used, without being cleared, in the XIth century. The opinion is based upon funerary urns found with the sarcophagi, which correspond accurately to others found in the same region and fully



THE COLOSSAL SIZE OF THE SPHINX IS EVIDENT FROM THIS VIEW ALONG ONE OF ITS RECENTLY UNCOVERED SIDES. THIS AND THE OTHER PICTURE BY COURTESY OF THE BALTIMORE SCULPTOR, BENJAMIN KURTZ, WHO MADE THEM.

Press despatches from Bourgos, Spain, state that an unnamed American antiquarian has purchased the manuscript of the ancient Spanish poem *El Mio Cid*. Exactly how the purchaser will surmount the legal difficulties in getting his treasure out of Spain is not stated.

ART AND ARCHAEOLOGY

ARCHAEOLOGY IN RUSSIA.

Extracts from the accounts recently published in the *Novy Vostok*, regarding the archaeological expeditions during the past four years in Russia and Mongolia, appear in the March issue of *The Geographical Journal*, of the Royal Geographical Society of London, to whose courtesy we owe permission to use the following abstracts:

"The Kozlov Expedition arrived in Urga in November 1923, and Col. Kozlov organized a number of excursions for the exploration of places in the immediate vicinity of Urga. Work was begun in February, 1924, on three separate groups of tumuli, 212 in all, situated in three small lateral valleys which intersect the wooded slopes of the Noin-Ulla Mountains, about 80 miles to the north of Urga. The tombs had been looted at some previous date by robbers, but nevertheless rich finds were made of miscellaneous objects in gold, lacquer, bronze, and iron, and, in company with human remains, tissues of silk, felt carpets. Remnants of fur robes and horse-trappings were also recovered. An approximate age of 2000 years is attributed to the culture revealed in the mounds of Noin-Ulla, and Mr. Borovka, of the Russian Academy of Sciences, indicates that it was of a definitely 'Scytho-Siberian' character. He regards this 'Scytho-Siberian' culture as being intermediate between the Hellenic civilization of the Black Sea region, and the contemporary civilizations of Achaemenian Persia, and of Han China. He concludes from the finds at Noin-Ulla that this intermediary culture extended over northern Mongolia. Chinese influence is emphasized in a series of objects which were undoubtedly imported direct from China, such as quantities of silk tissues, with or without embroidered ornaments, and many lacquered objects. He stresses the importance of this culture, not only as a receptive intermediary between the Hellenic and Iranian civilization and China, but as a creative influence which has affected the development of both European and Far Eastern art.

"Excavations were made by Prof. V. Smolin in the summer of 1925, in the vicinity of Abashevo, 18 versts from Cheboksari, not far from Kazan. Professor Smolin concludes from the finds that 'the archaic character of the ceramics, spirals and weighted earrings of silver, tin-plate, etc., refers to the Second Millennium before our era. The material of the Abashevo tomb appears to be contemporary with the antiquities of the Caucasus.'

"In the summer of 1924, G. Bonch-Osmolovski, on behalf of the Ethnographic Section of the Russian Museum, continued explorations already started in 1923 in the mountain districts of the Crimea. Excavations were undertaken at the cave of Kiik-Koba, near Simferopol. Osmolovski states that 'the stratigraphic condition of the find does not leave any doubt as to its Quaternary age.' Under the top black stratum appeared a thin brown stratum, under which lay the Quaternary yellow clay. In this mass were found the remains of two hearths, separated from each other by an intervening stratum. In each of the two 'hearth' strata were found the bones of fossilized animals, flint shavings, and implements. In the 'lower hearth' stratum of Kiik-Koba were found the bones of two human skeletons of an adult and of a child. The bones of the adult lay in a hole of rectangular form, which had evidently been excavated in the rocky floor, almost in the middle of the cave, orientated from east to west. The corpse had been laid on its right side, with the

knees slightly drawn up. The remains, indubitably buried artificially, although having points of similarity with the Neanderthal man, appear to be a little more primitive.

"Other Russian archaeological activities have covered the Tatar (Kazan) Republic, the Governments of Samara and Sartov and the Caucasus. Important contributions to the knowledge of the history of the Greco-Roman period in South Russia are the excavations of Prof. Farmakovski on the site of Olbia, and of Prof. Borozdin on the site of the Crimean Herakleia, Solkhat and Eski-Yurt in the Crimea which, together with Professors Ballod's and Rikov's work in the Volga region throw new light upon the mediæval culture of the Tatar Khanates of Southern and Eastern Russia. In the Caucasus, possibly the most interesting field of all, no serious work has been done."

In an interview with Dr. Alfred Kidder, *Science News Letter* in a recent issue quotes him as believing that "the thousands of terror-stricken people who have taken to Indian mounds to escape the flooding Mississippi waters, are showing scientists how the Indians probably used these earthworks which they built in pre-Columbian days. Each of these mounds, very frequent in this section, can take care of some 500 persons. Sturdily built of earth, they have resisted the onslaught of the waters for generations, and are now pinnacles of safety to the refugees. The situation today is strong evidence in favor of the theory that the mounds were originally built by the Indians a thousand years ago for this very purpose—to afford refuge from floods. Undoubtedly the Indians experienced floods of considerable magnitude and had to find some method of protecting themselves.

"In all probability," said Dr. Kidder, 'it was for this purpose that they toiled for years to build these high mounds. It was a gigantic task, since they had only their baskets in which to carry the tons of earth necessary to make them. It was at first thought that these mounds might be funeral piles like other smaller mounds in this section and in the Ohio valley, but excavations unearthed no human remains. However, post holes were discovered where the framework of buildings had evidently been erected. Baked clay was also discovered. This clay had plastered the log and twig structure of the building and was hardened into enduring form when the buildings caught fire. Were these mounds erected merely as high places for temples, as in the case of the Aztec and Toltec pyramidal structures? This was the conjecture. Against this theory arose the remote possibility that the mounds were places of refuge from floods—a theory substantiated by the present situation. The buildings were probably temples, altars and the habitats of chieftains,' said Dr. Kidder. 'In time of flood a mound could accommodate the entire tribe, most of the members of which probably lived in the inundated area.'

"Pyramidal in structure but with a flat top to permit erection of buildings, the mounds are about 150 feet in diameter and some fifty feet high. They are largely confined to the flood area of the Mississippi. A number occur, however, in areas in the valley which are not completely inundated in flood time. These were probably built later, Dr. Kidder said, in the manner of primitive peoples, after the erection of such mounds had become a custom. The funeral mounds, on the other hand, are much smaller and lower and occur frequently in both the Mississippi and Ohio valleys."

ART AND ARCHAEOLOGY

ART SALES IN THE MILLIONS

A survey of the art season just concluded at the American Art Galleries in New York shows a season of sales which totaled \$6,238,000, nearly a quarter of a million dollars in excess of last year's total, the previous high mark. An idea of the vast volume of art that pours into America can be gained from the figures. Well over twenty-five thousand groups, or lots, of art objects as they are designated, were dispersed among the forty-nine sales. As a "lot" may indicate either a single item or entire sets and suites, it will be seen that a good many thousand extra items were in reality sold.

The most popular type of furniture and art objects were those of Spanish and Italian origin which are so easily adapted to the architecture of the southern and western states. Fifteen sales were of this character, making the imposing total of over two million dollars, or one-third of the grand total. Other noteworthy groups were the seven collections of Oriental art, which totaled over a quarter of a million dollars; five collections of early American furnishings and Staffordshire, which fetched close to \$200,000, and lastly the five collections embracing house furnishings and treasures of various European and American origin, in all totaling close to \$700,000.

The most important painting sale held at the Association Galleries this past season was of the famous group of thirty-seven paintings by masters of the old school formed by the late James Stillman and C. C. Stillman. This sale aroused greater interest in the art world than has been evidenced in many years, due in large part to the appearance at public auction of one of Rembrandt's most famous portraits, that of his son, *Titus in an Armchair*. This picture brought \$270,000, creating the highest record ever paid for a picture at auction in this country. This small group of thirty-seven masterpieces realized \$716,950, which when added to the other eleven sales, brought the season's total for paintings in round figures to \$1,500,000.

The sale of Vital and Leopold Benguiat's rugs was another event of world wide interest. The premier rug among the eighty exquisite specimens of weaving was the famous royal Persian animal carpet of the early XVIth century, described by John K. Mumford as being "as near perfection as the woolen carpet of the East has come or will ever come." This extraordinary rug, a gift from the Shah of Persia presumably to the Sultan of Turkey, was purchased twenty-three years ago at these same galleries for \$38,000, then considered an exorbitant price. This year the same rug brought \$100,000.

The growing realization in Spain of the importance of archaeological research has recently resulted in the appropriation by the Government of considerable sums to conduct much needed excavations. The Roman circus at Mérida is to be exhumed at a cost of some 20,000 pesetas, and the objects recovered placed in the local museum; 25,000 pesetas will be spent in excavations at Cordoba, and a committee formed to take charge of the discoveries pending their final disposition; 15,000 pesetas have been granted the Tabacalera, or Tobacco Monopoly, to cover the thorough excavation of the Roman remains discovered when the Company began digging for the foundations of its proposed factory at Tarragona, the Company being already at work upon a private museum to house the trophies recovered; 20,000 pesetas more will cover work in the provinces of Teruel and Jaen, the results of which will ultimately go

to the archaeological collections in Madrid, and a total of about 100,000 pesetas in smaller sums is to be spent in a comprehensive examination of various promising sites.

To enable the American student to benefit to the greatest extent from art study abroad, the Paris Summer School of New York University will again give courses in the history of art and architecture, etc., with a faculty which includes leading European authorities who will lecture in English. The school was so successful last year that the Bavarian Government has suggested a similar institution at Munich, which will probably develop in 1928, while this summer courses will be given at Berlin University. The Paris lectures are given in the Louvre, and week-end trips to selected places of interest and importance to the work are included. The entire expense of the course and transportation to and from New York can be arranged for at very low rates on application to the University.

Nature reports the finding of a jar containing wheat-grains in an ancient ruined house of Sumerian origin at Jamdet Nasr, north of Kish. It is apparently about 5,400 years old, and seems much like the modern variety known as Rivet wheat. No previous finds corresponding to this have ever been made.

The Spanish painter Goya, who died at Bordeaux in 1828 and was buried there, is shortly to be reinterred in Spain.

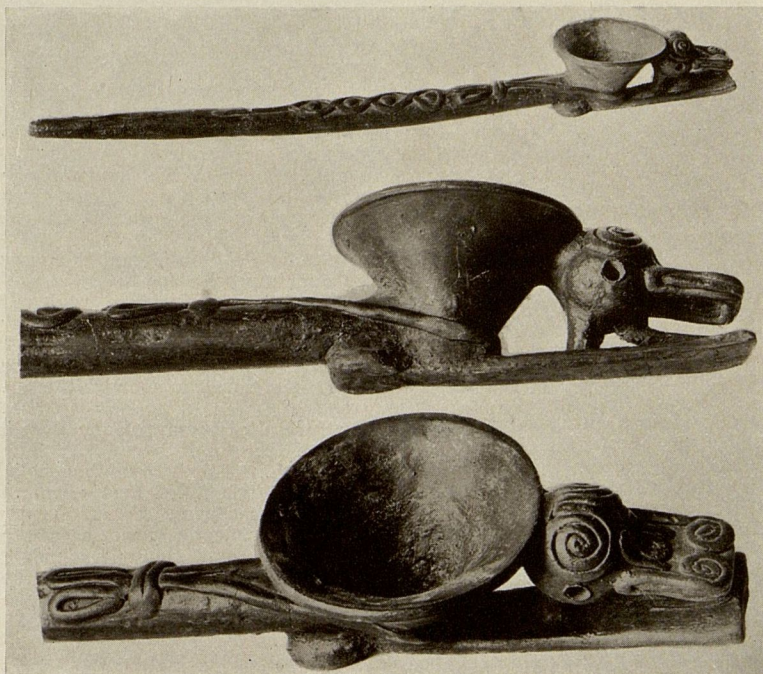
Five oil paintings of unusual interest and importance have been bequeathed by the late Don Luis Errazu to the Prado Museum in Madrid. The finest canvas is a Greco, painted in the master's early Toledan period, prior to 1578, and shows a kneeling knight of the Santiago, protected by his patron, San Luis, who is also in armor. Except for the famous likeness of Cardinal Niño de Guevara, this is regarded as perhaps Greco's most important picture.

With the dedication in May of sixteen mural paintings by Violet Oakley, Pennsylvania's most famous woman artist, in the State Capitol at Harrisburg recently, another fine art group has been added to the heretofore extensive works which comprise a fair-sized art gallery within the edifice. The new murals by Miss Oakley "give a new countenance to the Capitol," Senator George Wharton Pepper stated in presenting the paintings to the State. These new murals depict *The Opening of the Book of Law*, and are placed in the Pennsylvania Supreme Court Chambers, a room more secluded than many in the Capitol but regarded by those who have visited it as unsurpassed in beauty.

The first and last painting in the new group by Miss Oakley is hung over the entrance to the Chamber and is in the form of a monogram of the letters of the word "Law." The other fifteen panels are arranged to form seven general themes of *Revealed Law*, *Law of Nations*, *International Law*, *Common Law*, *Law of Reason*, *Divine Law* and *Law of Nature*.

It is reported from Jerusalem that Solomon's Pools, one of the most ancient water-supply systems in the world, were filled again March 2 last and put in use for the first time in many hundred years. As the public reservoir of the city, the pools contain some 40,000,000 gallons, but the British High Commissioner in opening them, called attention to their unreliability and urged the installation of a modern system.

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A DUCK-BILL PIPE FROM YUCATAN.

Last February the archaeologists of the Carnegie Institution, in excavating the floor of the Northwest Colonnade, the long-columned hall which flanks the front of the Temple of the Warriors' pyramid, Chichen Itzá, Yucatan, uncovered four fragments of a smoker's pipe which when fitted together formed a complete and magnificent specimen. The stem, broken into three pieces, was lying on the lowest floor level many feet below what is now the surface of the earth. Two feet or so away, in a cavity between two rocks of the filling material, lay the unbroken bowl. The pipe, made of red clay, is twenty-one inches long. The flaring bowl, still showing traces of smoke, is set back about three inches from one end. The projecting stem is shaped into the likeness of a duck's head. The head itself is hollow and contains a pellet of clay or of some other material, for the pipe rattles when it is shaken. This is the most remarkable small object so far found by the excavators at Chichen Itzá. It has been turned over to the archaeological department of the Mexican Government, who have placed it with many other exhibits found by Carnegie Institution workers in the Archaeological and Historical Museum in Mérida, Yucatan.

About the same time the excavators uncovered a remarkably well preserved Chac Mool figure, making the eleventh so far discovered at this site. These curious stone figures image one of the minor Toltec deities. They are always represented as a human form reclining on back and elbows, with knees drawn up, arms pressed tightly to sides and uplifted head turned to one side. The abdomen is flattened or hollowed out, presumably to form a receptacle for incense. The one just found is in perfect condition except for the nose, which seems to have been battered off instead of broken by a clean blow. It is about four feet long and stands upon a stone pedestal, a foot high, which is covered with stucco and painted red. The figure seems to have

had several renewals of plaster and to have been painted at one time blue and again white with vertical red stripes. The hair as carved in the stone is long and hangs down the back, being gathered together by a head fillet knotted behind with two little pendent tabs.

A prehistoric necropolis has been discovered on the island of Elba, near the town of Porto Ferraio, and is believed to date back to the time of the Trojan war. Many of the tombs are very crude, consisting merely of rough slabs of slate; skeletons were found in each tomb opened. The excavations are being continued, especially since, as the ruins of an ancient oven or furnace for iron-smelting have been found, it seems likely that further important discoveries may be made.

Le Vie d'Italia reports in its March issue that the English archaeologist Colonel Hardcastle has recently discovered new fragments of metopes at Selinunte, Sicily. They will be added shortly to the already beautiful collection in the Palermo Museum. The new finds

are considered of unusual importance since they belong to a period even more remote than the metopes from Temple C. The same number of the magazine carries notices of additional discoveries along the Appian Way, among them a group of statues, beautifully preserved, which include a herm of Dionysos, two undoubtedly portrait statues of women, a head of Esculapius and a number of interesting fragments.



A REMARKABLY WELL PRESERVED CHAC MOOL FIGURE UNCOVERED AT CHICHEN ITZA, YUCATAN.

GLOSSARY

A

(Complete for July-Aug. and Sept.)

- A'pi-na'ma:** the Accadian name of the month Arakh-samna, roughly corresponding to October; the Assyr. name means "the eighth month".
- A'pi-na'na:** in Chaldean astronomy, the name of a fixed star.
- A'pi-on:** a Gr. grammarian and Homeric commentator, best known through his story of Androcles and the lion.
- A'pi-rak':** an anc. Bab. city whose site is not positively identified but which may have been Karok or Nisinna.
- A'pis:** the black bull-deity of Memphis and most important of all the sacred animals in Eg. myth., because he represented a reincarnation of the creator Ptah; he was born of a cow and a bolt of lightning; after death he was buried with great pomp and expense in his temple of the Serapeum of Memphis, and adored as a deity under the name of Osiris-Apis, or Serapis.
- a-pob'a-tes:** in Gr. mil. hist., a foot soldier who stood beside the driver of a war chariot to fight, or leaped from it as the conditions of battle required.
- ap'o-cha:** in anc. Ro. law, a receipt for moneys disbursed.
- ap'od-y-te'ri-um:** the dressingroom of a bath or palaestra in ancient times.
- A-pol'li-na'ri-an:** in classic Gr. times, pertaining to Apollo. **Apolline.**
- A-pol'li-na'ris:** (1) A. "the Younger", Bishop of Laodicea, founder of Apollinarianism (or Docetism) and ardent opponent of Arianism; d. A. D. 390; (2) A. Sulpicius, a noted grammarian of Carthage in the II^d century, A. D., and teacher of Pertinax and Aulus Gellius; (3) A. Sidonius, Caius Sollisus, A. D. 430-488; a Christian ecclesiastical writer and bishop of Lyons, noted for his political wisdom and geniality.
- A-pol'lo:** in Gr. myth., one of the most important and accomodative of the twelve major deities; son of Zeus by Leto, and twin of Artemis; usually worshipped as the god of light, youth, music, poetry, masculine beauty, prophecy, colonization, flocks, agriculture, medicine or healing, streets and roads; the universal helper and averter of evil, etc., he stood for the spiritual conceptions of ancient Greece at their noblest.
- A-pol'lo-do'rus:** the Vth century B. C. Gr. painter supposed to have invented chiaroscuro.
- Ap'ol-lo'ni-a:** in anc. Greece the festival of Apollo, held at Delos in years when the Delia was omitted.
- A-po'phis:** See **Apopi.**
- a-poph'y-ge:** (1) in archit., a concave curve rising from the base to the shaft of a column, or descending from the capital to the column; (2) in certain early Doric capitals, the hollowed molding below the echinus.
- A-po'pi:** the 4th king of the XVth (Hyksos) Dynasty, 1813-1778 B. C., the first of his line to assume importance: **Oeusre** was his Reed- and Hornet-name, meaning the "Great and Powerful One of the Sun-God".
- ap'o-tro-pai'on:** in anc. Greece, any magic charm or amulet preventive of evil.
- a-pox'y-om'e-nos:** in classic times, the wielder of a flesh-scaper in a bath or gymnasium.
- ap-par'i-tor:** in anc. Ro. times, the person who executed the orders of a magistrate.
- Ap'pi-an:** in Ro. hist., proper to the family of the Appii.—**A. Way:** the highroad 350 mi. long, from Rome to Brundisium (Brindisi), begun B. C. 312 by Appius Claudius Cæcus.
- Ap'pi-us Clau'di-us:** the Ro. consul and decemvir who was deposed and impeached for his seizure of Virginia as a slave; k. himself before trial (Cf. Macaulay's *Lays of Ancient Rome* for the popular form of the story).
- Ap'ra:** a town of Syria supposed to have been the Ophrah of the Bible; mentioned in some of the Eg. papyri.
- a'pro:** a part of the funeral ceremony of anc. Egypt called the "opening of the mouth".
- Ap'sa-ras:** in Hindu myth., a lovely nymph usually described as the reward of a fallen hero taken to Indra's paradise, or as the consort of Gandharva; sometimes represented as 60,000,000 virgins whose duty it is to "solace the gods and the souls of men".
- Ap'su:** in Bab. myth., the Accadian name for Chaos, the father of all gods; literally, "the deep" or "the abyss".
- Ap-syr'tos:** Cf. **Absyrtus.**
- apt:** (1) the anc. Eg. name of the hippopotamus; (2) A., the sacred name of the city of Thebes. **Aptu.**
- Ap'ta:** the "Horn of the World", the name given by the anc. Eg's to the southern extremity of the world as they knew it.
- Ap-te'ra:** a name of Anubis as "Guide of the Road".
- Ap'uat':** a jackal-headed god in Eg. myth., similar to but distinct from Anubis, and like him a guardian and guide of the dead.
- Ap'u-lei'us:** the II^d cent. Ro. satiric author and philosopher best known for his *Golden Ass*.
- a'quae-ma-na'le:** (1) in early and mediaev. civilization, a water-pitcher or ewer, usually of uncouth shape, as a distorted or grotesque animal; (2) an anc. Ro. pitcher for water only.
- A'qer:** one of the magical serpents of Eg. myth.
- ar:** an anc. Eg. unit of land measure. **Aroura.**
- A-rach'ne:** in Gr. myth., the Lydian country girl who defeated Minerva (Athena) in spinning and weaving; scorned by the goddess, she hanged herself and was transformed into a spider.

The words below all appear in articles or book reviews contained in this issue. Each archaeological term will appear later in its proper alphabetical position, fully defined and accented.

Genghis Khan: b. 1164, d. 1227; the Mongolian soldier who conquered N. China, Tartary and Persia, and whose ferocity caused more than 5,000,000 deaths.

Kublai Khan: b. 1214, d. 1294; the Grand Khan of the Mongols; after conquering China he established the Yuen Dynasty, with Buddhism as the State religion.

phallic: characteristic of or pertaining to the generative power of Nature, or its manifestations.

Timur: Tamerlane; b. 1336, d. 1405; famed as the Tatar who conquered both India and China.

yak: a grazing bovine of the higher part of central Asia, between the ox and the bison, domesticated by the Tibetans.

BOOK CRITIQUES

Handbuch der Kunstgeschichte, V, Die Kunst von 1800 bis zur Gegenwart. Von Anton Springer. Neunte, verbesserte u. erweiterte Auflage, bearbeitet von Max Osborn. Pp. xiv, 539. 32 plates in color, 4 photogravures, 653 illustrations in the text. Alfred Kröners Verlag. Leipzig, 1925. (24 mks) \$6.50.

The ninth edition of Vol. V of this popular history of art completes the recent revision of the entire *Handbuch*. The text has been entirely revised and the last section rewritten in harmony with the latest criticism; many new text-cuts have been inserted, the colored plates doubled from the preceding edition, and four phototypes of sculptural subjects added. It also contains a wholly new feature: a selected bibliography of books and magazines on art arranged to correspond with the chapters in the text, which is laid out in chronological sections.

It was, of course, inevitable that a German history of art should stress German achievement and be largely German in viewpoint. Nevertheless, the outlines have been drawn on a large canvas and the only criticism possible is in reference to the filling in of the details. On the whole Dr. Osborn's conclusions are judicious, and his choice of material excellent. He has given in this volume a clear, concise and authoritative account of the main features of European art since 1800, which for attractiveness has no equal in any other popular history.

It is interesting to Americans to learn how he has appraised art in the United States. With American collections of European art he seems to be quite unacquainted, as one example will show. While devoting many pages to the work of recent French painters, he makes no mention whatever of the Duncan Phillips Memorial Gallery's Daumiers nor of the superb collection of the works of Cézanne, Renoir, Matisse and others in the Barnes Foundation Museum at Merion near Philadelphia. Nor does he speak of the work of any foreign artist in America, such as the panel frescoes in the Boston Public library by Puvis de Chavannes, which illustrate that artist's best period, when he was able to transcend all realistic vision. A brief summary of American painters is, for the most part, a mere catalogue of names from Mount to Dannats, with a little more space devoted to Whistler, who is praised as a

"phenomenon of international character". The only American sculptor named is Saint Gaudens, rightly called the "most important". American architecture is also slighted, and impatience is manifested with the sky-scraper type, of which only the Equitable Building in New York is shown. No mention is made of war memorials, either here or abroad. The illustrations leave nothing to be desired, and the 12-page index is admirable. In fact, the *Handbuch*, brought up to date in its new dress, has no rival in any language as a popular account of the whole field of art from Egypt to our time.

WALTER WOODBURN HYDE.

Tawny Spain. By H. C. Chatfield-Taylor. Pp. xii, 158. 4 etchings by Ada C. Williamson. Houghton Mifflin Co. Boston and New York. 1927. \$3.00.

Spain may well wish to be spared most of her friends. It is hardly likely that any other country in creation has suffered so for centuries through partial understanding, bad judgment on the part of friend and enemy alike, deliberate misrepresentation, and stupidities. Possibly the strength and flavor of Spanish personality has something to do with this: character is invariably susceptible of misconstruction. So it is more than easy for even the best intentioned of books to convey to the reader ignorant of Spanish life and customs a picture which contrasts unfavorably with the descriptions of other lands and peoples which have not a tithe of the Peninsula's importance, beauty and charm.

Mr. Chatfield-Taylor's present volume is a book of this type. The author gets off on the wrong foot by prefacing his work with the statement that the sketches making the basis for the volume were magazine articles, written no less than 31 years ago, and republished in 1926. That he has rewritten them so thoroughly that "scarcely a sentence remains untouched" does not change the point of view; nor do the two visits he has made to Spain during the past three years. His first chapter, "The Spaniard", is also as unfortunate as it is in the main true: a disconcerting example of the wrong way to sketch a proud and unconquerable people's development. This peculiar strain, indeed, permeates the entire work. It is a pity, for Mr. Chatfield-Taylor

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knows his Spain, and despite his incurably American superiority conveys a great deal of solid fact. The only equivocal statements occur in his historical references, and a careful perusal of every word in the book makes the present reviewer, himself with a quarter of a century's first-hand knowledge and study of Spain, regret sincerely that a volume with so many good points should be marred by obvious flaws.

A. S. R.

The American Indians and their Music. By Frances Densmore. Pp. 143. 5 illustrations, 8 songs. The Woman's Press, New York, 1926. \$2.

This little book is artistically brought out by the Woman's Press. The author while treating briefly of languages, arts and crafts, ceremonies, dances, games, archaeology and history, leads the reader pleasantly into the little known realm of Indian music, which she presents with her well known literary skill. Her extensive studies among the tribes, and especially in this otherwise neglected field, are recorded in many publications, scientific and popular, but this little book brings together in attractive form the substance of these studies, embodying also much valuable information regarding tribes, many of which have received but slight attention from ethnologists. The book will be read with interest and profit by the people generally since it satisfies both scientific and popular requirements.

WALTER HOUGH.

Picturesque Canada. By Louis Hamilton. Pp. xxxiii. 1 map, 288 plates. Brentano's. New York. 1926. \$7.50.

With a great country that stretches from the Atlantic to the Pacific and from latitude in the south corresponding with that of Rome, to far beyond the Arctic Circle in the north, with every variety of climate, scenery, mountains, lakes and rivers, Canada is certainly a land to be reckoned with.

This German-printed book by Louis Hamilton with its wealth of illustrations—288 of them—shows the vastness, varied industries, agriculture, architecture and majesty of our neighbor that lures the sportsman with rod and gun, the summer idler, or the student of ethnology. As Canada is peopled by many nationalities, one can study man there in his earliest abodes in wood and plains, as well as in mansions and castles on the hills.

The introduction to the volume, though short, gives a historical sketch of Canada that is illuminating, and now that the population is nine million (according to the census of 1921) and sends its minister to the United States, we should know more of our friends to the North. The photogravures are exceptionally good and picture the charming little villages of Prince Edward Island, the great locks in the rivers, the falls, wheat fields, cattle ranches, the lovely Lake Louise and the magnificent mountains of British Columbia.

HELEN WRIGHT.

The Lady of the Lotus, Rup Mati, Queen of Mandu; a strange tale of faithfulness, by Ahmad-ul-Umri. Translated with introduction, notes, etc. (and illustrations from miniature paintings and photographs) by L. M. Crump, C. I. E. Pp. xiv, 96. Oxford University Press, London and New York. 1926. \$6.

This romantic and tragic tale, founded on fact, recounts the devotion of the heroine, Rup Mati, to her lord Baz Bahadur, last ruler of Malwa in west central India, who was overthrown by the rise of the Mogul power in the XVIth century under the great Indian Emperor Akbar. The artistic reproductions in color from native miniatures of the period and the photographs of archaeological remains connected with the historic story enhance the merit of the work.

From Indian annals we know that one of Akbar's generals defeated Bahadur in battle in 1561. Imperiously the swaggering general demanded the love of Bahadur's beautiful and devoted queen as a reward for his victory. Believing that her lord was slain, she pretended to yield to the victor's claim and arrayed herself in bridal attire; but as the conqueror entered the silent chamber he found her lying dead, having taken poison in order to follow her beloved liege. In the sad words of the tragic tale as translated, "she died a martyr to faithfulness and an example to the sect of overs."

This story, which still abides in the hearts of the provincial folk of Malwa, inspired the Turkoman writer Umri, who visited India a generation after the fatal event, to give it literary form in Persian about the year 1599. His manuscript seemed to have been irretrievably lost, but Mr. Crump, who knew of the manuscript, gives a fascinating account of his search, which resulted in finding, not the original, but a transcript made some years later. Mr. Crump makes special acknowledgment to

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local Persian and Hindi scholars for help in the quest and for aid with the translation.

It is possible that three of the miniatures he recovered may have come from the original manuscript of Umri, but the translator, while entering a plea, leaves it for the acumen of specialists to decide. At all events, in a few instances the delicate portraiture that grace the present volume bear attributions as "the work of" known miniaturists of the period of Akbar and later—such a technical designation being employed by Mogul artists in signed paintings. Students of Persian art will be interested in the frontispiece with Govardhan's name (early seventeenth century) and also in the unscribed miniature, portraying the heroine and her lord, that faces page 47.

The ten photographs taken from Mandu, a city now in ruins, should attract the attention of the archaeologist who is interested in the great edifices of India's past as well as in the romantic tale of Rup Mati's love for Baz Bahadur.

A. V. WILLIAMS JACKSON.

The Social and Economic History of the Roman Empire, by M. Rostovtzeff. Pp. xxv, 695. 60 plates. Oxford University Press, London and New York. 1926. \$15.

A History of the Ancient World, Vol. I: The Orient and Greece. By M. Rostovtzeff. Translated from the Russian by J. B. Duff. Pp. xxiii, 418. 89 plates, 36 figures, 5 maps. Oxford University Press, London and New York, 1926. \$15.

No one who sees the beautifully printed and profusely illustrated *Social and Economic History* will fail to envy those fortunate enough to possess a copy, while those who read it will scarcely be able to put it down until the last absorbing chapter in the tragic history of the decline of ancient civilization has been finished. Despite its name, the work is in reality an account of the various stages in the economic and social deterioration of the Roman Empire, prefaced by introductory chapters which summarize Rome's development before the Flavian period.

From the age of enlightened monarchy when civilization and government were based on the too-narrow foundation provided by the bourgeoisie of the prosperous city-states to the time when class war had brought all to a dead level of servitude, though not of equality, we see the peasants (and occasionally the city proletariat) chafing under their burdens, learning to hate privilege as it was entrenched in the cities, and with a blind impulse using the army

which they had come to man and officer as a means of destroying all possibilities of prosperity for both themselves and the class they considered their oppressor. In this class antagonism lies the secret of Rome's decline, if we interpret correctly the mind, or rather the heart, of the author—for the reader instinctively feels that the tragic drama which is developed within the pages of this volume has sprung from his very heart.

The fall of the bourgeoisie, sum and substance of civilization in all its forms, the foundation on which rested the over-heavy fabric of the Empire, carried with it the fall of those who struck it down in their unseeing despair. The sympathy of the author and of his readers is aroused by the sufferings of the class to which civilization owed both its existence and the possibility of progress. Yet the fate which the bourgeoisie suffered was not undeserved. They are indicted as drones, fattening upon the labor of others. Their *raison d'être* disappeared when they ceased to lead the world toward a higher and better civilization. With the cessation of progress came despair and hate on the part of the oppressed, feelings not unwarranted. Regarded thus, the fate of the victorious peasants was the more tragic because undeserved.

As may be seen from the foregoing paragraphs, Rostovtzeff accepts none of the current theories as to the causes of the downfall of the Roman Empire. The volume ends with a statement "that the main phenomenon which underlies the process of decline is the gradual absorption of the educated classes by the masses, and the consequent simplification of all the functions of political, social, economic, and intellectual life, which we call the barbarization of the ancient world", followed by a warning that "violent attempts at levelling" do not uplift the masses but accelerate barbarization; and a query, whether any civilization can endure after it begins to penetrate the masses. One may well ask in return whether the pessimism manifest in these final sentences, and the theory of decline on which it is based are not open to the charge of *non sequitur*.

In the matter of details the author shows a mastery which staggers his readers. Although they may not always agree as to a given point, they must marvel that one man has had the time and energy to read the evidence and to form opinions on the thousand and one problems connected with his subject, and finally, the acumen to bring them into coherent relationships.

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The various chapters of Rostovtzeff's second book, the first volume of a *History of the Ancient World*, took shape as lectures to a freshman class at the University of Wisconsin. This explains much of their character, their brevity, their sacrifice of details for broad generalizations, and the choice of topics. The book is not long. Only about three hundred pages are actually devoted to text. To bring the history of five millenia into such a compass requires drastic methods of selection and compression, and since it is difficult to compress without distortion, at times the literal meaning of the author's words seems not to correspond to the facts themselves. Approximately two-fifths of the work are devoted to the oriental monarchies, the rest to Greece. In this volume also the chief interest of the writer is social and economic, for political history in all periods occupies about two-thirds as much space as the other aspects of ancient civilization taken together.

In both volumes the great services of archaeology to the historical student are apparent on every page, especially in the extraordinary number of excellent plates, chosen with care to illustrate the text—including coins, wall-paintings, mosaics, vases, and objects of many sorts found in widely scattered excavations. The author's description adds much to their usefulness. More than a quarter of the bulk of the first volume and about a half in the second is due to these plates.

In conclusion the reviewer wishes to repeat as his own a judgment expressed by others. Rostovtzeff's *Social and Economic History* is the greatest contribution to our understanding of the Roman Empire that has appeared in many years. His *History of the Ancient World* will be very useful to many, both college students and general readers, who wish a brief introduction to ancient civilization in its various aspects.

ALLEN B. WEST.

The History and Civilization of Ancient Megara. Part I: By E. L. Highbarger. The Johns Hopkins University Studies in Archaeology, No. 2, edited by David M. Robinson. The Johns Hopkins Press, Baltimore. 1927. P. xv, 220. 6 illustrations. 1927. \$2.50.

Dr. Highbarger has written an interesting book on an interesting and important subject. In fifteen chapters it deals with "Topography and Monuments", "Cults", "The Mythical Kings and the Heroic Age", "The Dorian

Invasion and the Beginning of the Megarian State", and finally "Megara During Hellenistic Times". The preface promises in the near future a second volume which "will complete the history, will contain additional chapters dealing with Megarian civilization and character, and will include a Prosopographia Megarensis and complete indices".

The present volume contains a great deal of useful material collected with painstaking industry from a great variety of sources, ancient and modern. At least as a compendium of material for historical study it should be received gratefully. As an historical sketch, however, the book has some serious defects. There is not much critical examination of the sources. To a large extent the old, uncritical method is followed, by which the statements of ancient writers are collected and combined in a kind of mosaic; if the pieces do not fit together very well, parts of them are chipped off. The various heroes of the prehistoric period are, of course, treated as legendary; but historical deductions are made from the legends, "although", as the author says on page 68, "it will not always be possible to determine the precise value of the individual story in itself". If the stories seem reasonable, they are accepted as probable or at least possible; if not, they are sometimes rationalized.

In dealing with the periods after 700 B. C. the author is on much safer ground. Theognis, being a Megarian, is naturally a principal witness. But Dr. Highbarger does not seem to recognize that the verses which have come down to us under the name of Theognis have been brought together from a variety of sources, including Solon, and that with many of them Theognis had nothing at all to do. There are some very questionable statements, as on page 124—"The men of the hills, who represented the democrats"; and some contradictions, as on pages 108 and 109. In the main the chapters on "Colonization", "The Megarian Decrees", and "The Peloponnesian War" are very good. But a good deal of the second half of the book, beginning with Chapter VII, consists chiefly of selections from the standardized traditional history of Greece, applied as far as possible to Megara, without much criticism and without much evidence to justify the application. In particular the last two chapters, on "The Fourth Century" and "Hellenistic Times", are very superficial.

WM. K. PRENTICE.

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The twenty-two books listed below in groups have been favorably reviewed in ART AND ARCHAEOLOGY and in other authoritative magazines. You can order them safely. An asterisk beside the author's name means in each case that the book possesses more than usual value.

ARCHAEOLOGY

- A. L. Frothingham: MONUMENTS OF CHRISTIAN ROME. \$3.
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