



Fig. 1. View from the doorway of Great Temple IV. The ancient Maya of Tikal built so high that visitors can get above the present-day cover without an aeroplane. We are here 148 feet above the plaza, looking out through the doorway of Great Temple IV, the total height of which is about 228 feet—the equivalent of a 22-story building. Between us and Great Temples III, II and I the trees now hide what was once a continuous system of masonry structures and lime-concrete pavements.

UNIVERSITY MUSEUM BULLETIN

VOL. 20

DECEMBER, 1956

NO. 4

THE TIKAL PROJECT

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When I came to the University Museum in 1947, Percy Madeira spoke to me of his hope that some day the Museum might undertake the exploration of Tikal, the largest, and probably the oldest, of all the great Classic Maya cities in Middle America. At that time Tikal was a "lost" city buried in the dense tropical jungles of northern lowland Guatemala. It was completely covered by the tropical forest in 1937 when Samuel B. Eckert of our Board of Managers photographed it from the air. It was then feasible for Mr. and Mrs. Eckert to see it on the ground because an air-strip had been opened some 15 miles (24 km.) away for the chewing-gum industry. Though silent and deserted it had been known for a hundred years and preliminary surface explorations by archaeologists had been conducted on several occasions. An adequate investigation here had been prevented by inaccessibility and lack of a year-round water supply. The modern aeroplane changes the picture.

Every visitor has been astonished at the great size of the place, and by the heights of five of its dozens of masonry temples. Thinking of what ought to be done, they have been appalled both at the size of the buildings and at the enormous task of clearing, excavation, and restoration, necessary before the real significance of Tikal could be made known to the world at large. But each visitor had returned an enthusiast for a Tikal project of the future.

As early as 1948 Linton Satterthwaite, Percy Madeira, Samuel Eckert and I set up a tentative plan of campaign at Tikal and enlisted the whole-hearted support of John Dimick, who had excavated and restored the highland site, Zaculeu, for the United Fruit Company, and also of Edwin Shook, who had worked at many Maya sites in all parts of the Maya

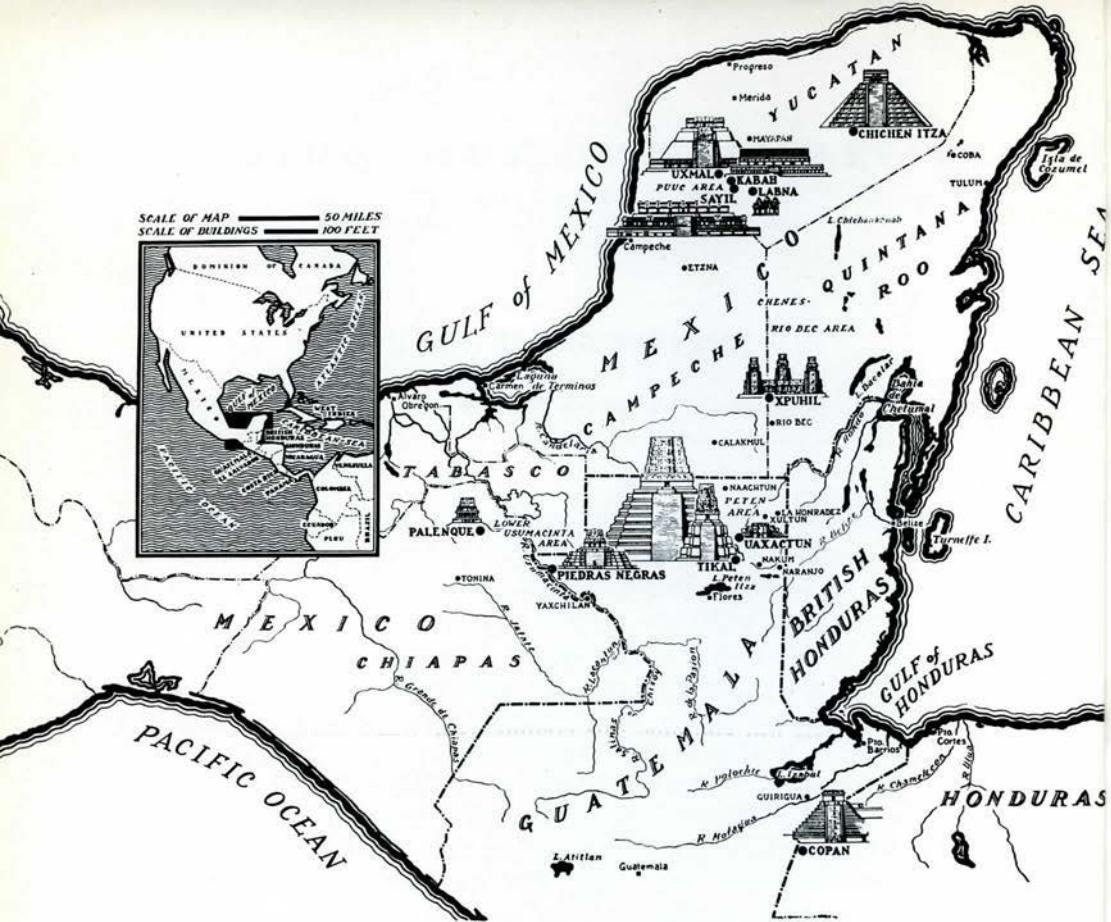


Fig. 2. Map showing selected sites in the lowland Maya area. Tikal is marked by drawings of two of the Great Temples; it is in the northern lowland portion of Guatemala. After Proskouriakoff and by permission of Carnegie Institution of Washington.

area for Carnegie Institution of Washington, had assisted Mr. Dimick at Zaculeu, and who knows Tikal better than anyone else. But at that time there were difficulties in Guatemala, as well as insuperable problems of transportation through the jungle to the site, and problems of financing work in such an inaccessible area as the Peten. Our hopes and plans did not materialize.

Now, eight years later, it is a tremendous satisfaction to see our plan put into operation by the same men who conceived it in 1948. Edwin Shook,

who has come to the University Museum on leave from the Carnegie Institution for five years, completed the first preliminary season of work at Tikal last spring and is now in Guatemala arranging for the next season to begin in January.

Some of his pictures, with captions based on his reports, are reproduced here. Searching for sub-surface water, "bushing," and building a camp for the future were the objectives. Scientific results were not expected this first season, but considered as by-products, they were considerable. A companion article by Satterthwaite deals with one of Shook's discoveries. We have established a permanent camp, cleared some 5 miles (8 km.) of roads through the ruins, and cleared the Central Court with the Acropolis to the south of it, an area of 12 acres (5 hektares). The first season has also resulted in the discovery of many new structures, including a new ball court and the discovery that the area of ceremonial courts and buildings is even larger than supposed. It is now estimated at more than six square miles (16 sq. km.). A 60-foot open well through solid hard limestone failed to reach water. This basic problem is yet to be solved. Clearing and exploration will continue this coming year while excavation begins.

All this has been made possible by changing circumstances in 1955. An air field constructed by the Guatemala Government at Tikal itself has at last made major work there a practical possibility. But even more important is the sincere and enthusiastic support of Colonel Carlos Castillo Armas, President of the Republic of Guatemala, and many other Guatemalans such as Carlos Sameyoa C., Director of the Institute of Anthropology and History, Antonio Tejeda, Director of the National Museum of Archaeology and Ethnology, and Lic. Adolfo Molina Orantes, Member of the President's Council. Many other friends in Guatemala, not in government, aided our Field Director in countless ways. Together we all embarked upon a Guatemala-U. S. venture in cultural relations which will result in the rediscovery of America's greatest monument to its ancient civilization.

This cooperation, it seems to me, is dramatically illustrated in the figure which shows a Guatemalan Air Force plane unloading supplies for the expedition at Tikal. The Government supplies air transport of materials and men; without such very material help from Guatemala our venture would be impossible. President Armas has twice during the last season visited the expedition camp at Tikal and has personally arranged to

Fig. 3. (*Below*) Perspective sketch of mapped portions of Tikal, Guatemala. By permission of Southwest Museum, Los Angeles, California. The tallest pyramid-temple (Temple IV) shows at the extreme right, its ornamental "roof-comb" reaching 228 feet above the plaza of Group D. Note the great wide causeways connecting the outlying Groups I and H, at upper and lower left. The distance between them is about a mile. Beyond the "Great Plaza" at the center of Group A was a large reservoir formed by damming a ravine. The drawing is based on published maps. Group H was not discovered until 1937, and Group I not until 1951.

Fig. 4. (*Opposite, above*) Tikal from the Air. At the left Great Temple IV protrudes above the 100-foot trees. So do Temples III, II, and I, which the plane will pass in that order. Their white masonry shows in the shadowed area. Beyond them is the government air-strip which now makes major archaeological work possible.

Fig. 5. (*Opposite, below*) An Air Force plane unloads expedition supplies. The government of Guatemala also maintains radio communication. The Tikal project would be impossible without its active cooperation.

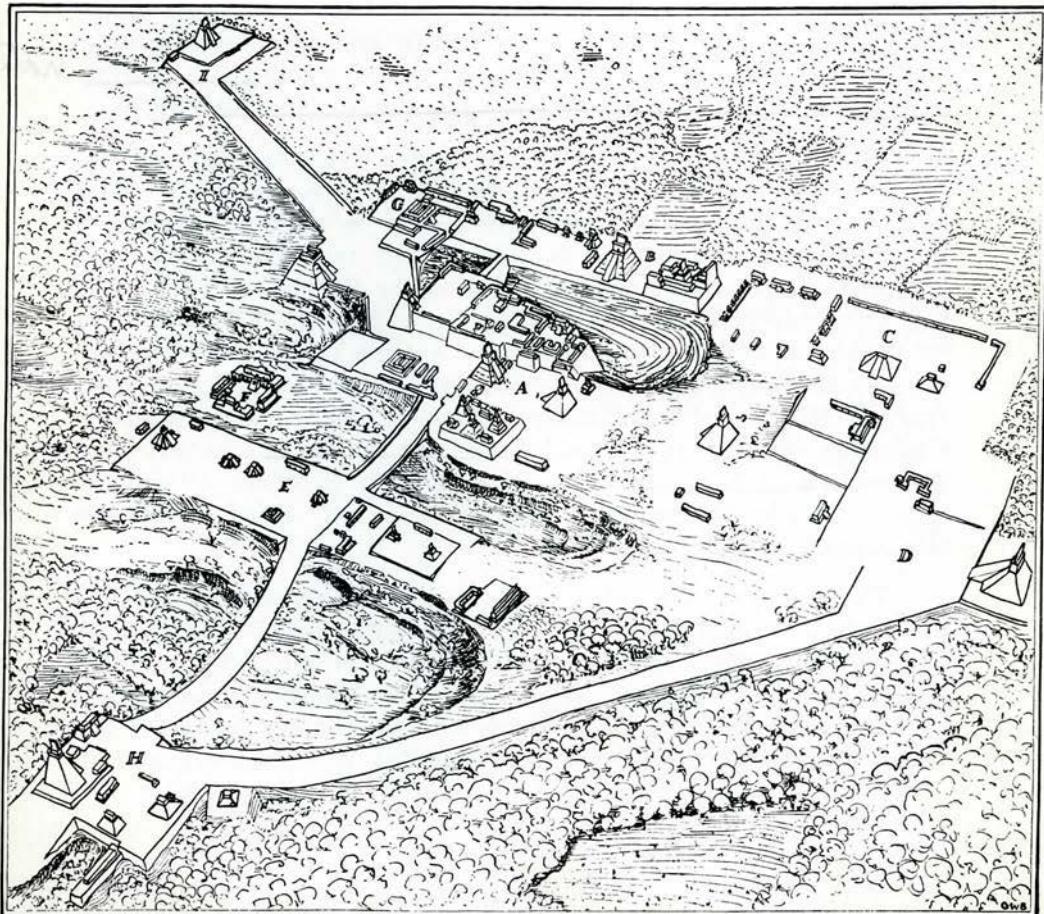








Fig. 6. (*Opposite page, upper*) Camp site "bushing" and house-building. Work must be pursued on all fronts at once, for the dry season is short.

Fig. 7. (*Opposite page, lower*) Episode in the diffusion of modern gadgets. The staff kitchen was built around its basic equipment—a stove and refrigerator. These are being connected to a cylinder of gas. Maya women were soon making their time-honored *tortillas* on the hot plate of the stove.

Fig. 8. (*Above*) Tying roof-elements together with vines. Camp architecture is in local style, with a few refinements to be added. No nails are used and the only tools are the axe and bush-knife. Every *Petenero* is a house-builder, but some are better than others.



Fig. 9. Starting to thatch the roof of a camp building. The palm leaves must be searched for and carried considerable distances. They form overlapping rows, like shingles.



Fig. 10. The Tikal camp, seen from a tree-top. Eight permanent buildings were roofed before the summer began. Only the kitchen-dining room had then been supplied with room-partitions and lime-plastered walls. Numerous additional buildings will be needed as the project develops. Once a permanent water supply has been obtained, workers are expected to settle with their families around this nucleus.



Fig. 11. Field Director Shook and guests under the first permanent roof. Next year there will be more room, and mud-plastered walls with screened doors, windows and ceiling will make mosquito nets unnecessary. The guitarist is Paul Basch and the man in the background is Irving Cantrall, of the Michigan Natural History contingent.

Fig. 12. Tourists, 1956 style. The visitors are approaching the Museum camp from the air field. Until accommodations are arranged they must bring their own lunch (including water) and return to the capital the same day. Even so there was a steady flow of interested public throughout the first season. A hotel is envisaged for their accommodation, with proper guide service, as soon as the water problem is solved.



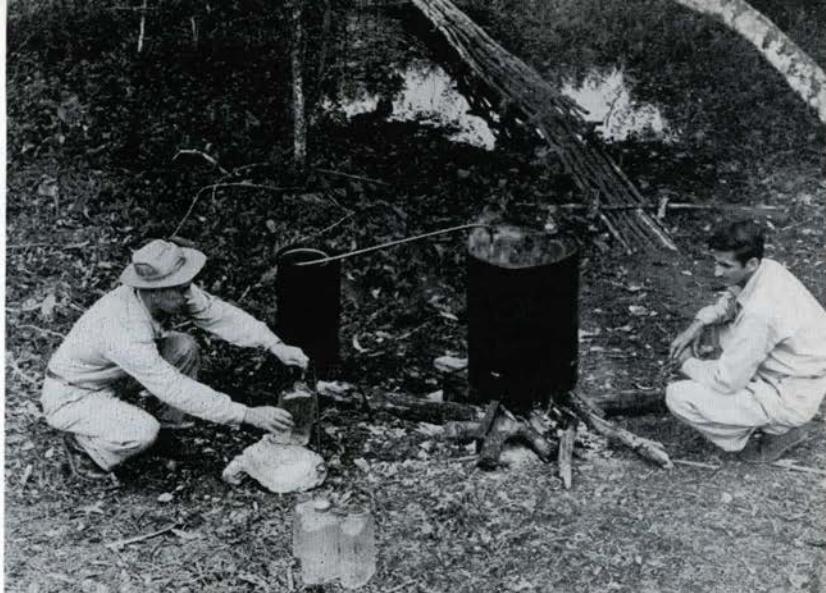


Fig. 13. The Tikal waterworks of 1956—while it lasted. Field Director Shook draws water from a still of his own design. Antonio Ortiz, Chief Foreman, looks on. The local people took their water from the stagnant pool in the background without such precautions. It was full of all sorts of life, including a crocodile who disappeared when the pool dried up.

Fig. 14. A "finished" trail. The ceremonial heart of Tikal was a tremendous assemblage of masonry buildings, paved courts and raised causeways. To get about in it a system of permanent trails for foot and wheeled traffic is necessary. About five miles of such trails were cut through the forest during the first season. They connect most of the known major architectural groups with each other and with the air-strip and camp site.

The trail would become choked with fresh growth and newly fallen trees within a year unless kept in shape by a skeleton crew during the long rainy season. As long as it is properly maintained one may walk as in a park, getting the "feel" of the undisturbed tropical forest on either side. Monkeys are frequently overhead. Shooting has been forbidden and one hopes they will remain unafraid.



establish radio communications between the camp and Guatemala City. The Guatemalan Government maintains the air field there and now commercial airlines have begun to fly in plane-loads of visitors from the North as well as Latin America.

Our most urgent problem at the moment is water. In the dry season when we can work at Tikal there is no water supply except a catch-basin of rain water. This normally runs dry in April and at best cannot supply the necessary number of workmen. Edwin Shook, our Field Director, upon whom most of the burden of the whole operation must necessarily fall, is at the moment arranging to air-lift well-drilling equipment into Tikal from Guatemala City. It may be necessary to drill as much as 300 feet to reach a permanent water supply and we need at least two wells to supply the camp and air field.

Last season our party at Tikal consisted of Shook, Peter Mack, George Holton, and Antonio Ortiz, with Linton Satterthwaite temporarily there during the excavation period. But in addition, collaborating with the Museum's expedition, was a party of naturalists from the University of Michigan: T. H. Hubbell, L. C. Stuart, I. J. Cantrall, and Paul Basch. All of these men with 40 workmen and many visitors were a heavy drain on the scanty water supply. But it is part of our plan to encourage collaboration with other scientists eager to work in the little known jungles of the Peten, believing that this is useful to the whole project and to the opening up of the Peten.

The area of Tikal has been declared a National Park, and it will not be invaded by oil rigs which are expected to appear all around it. As soon as permanent water is found, private enterprise will undoubtedly install hotel facilities for visitors. It is part of our plan to help tourists learn about the past by seeing some of its greatest products face to face. Tikal is being opened up not only for archaeologists, but for the people of America in general, who support them.

Our belief in the significance of Tikal is justified, I believe, by the nation-wide response to the announcement in American papers that we would undertake its exploration. Response from people like Colonel Truman Smith and Phoebe Gilkyson, who have long urged the study of Tikal, is not surprising. But letters of encouragement have come in from all over the country, some with contributions toward the work by people knowing little about the Museum or of its years of work in Middle

America. Others, like Ambassador Spruille Braden and Mr. and Mrs. John Dimick are giving much of their time and energy to advance the long-term project, believing as we do that the rediscovery of this great city in the jungle will be a major contribution to our study of human history and to the best kind of cultural collaboration with our Latin American neighbors.

Our belief is also justified by the financial support we have already received from the American Philosophical Society, the Rockefeller Foundation, and from a very generous individual who desires to remain anonymous. With such aid, augmented by contributions by members of our Board of Managers and other individual friends, and added to regular Museum research funds and the active support of the Government of Guatemala, we shall be exploring, clearing the forest, and excavating for a minimum of five years.

But we are aiming at a 10-year program, and at consolidating the masonry of the New World's tallest and most beautiful temples. As some of Shook's pictures show, after a thousand years these are still magnificent, but each year takes its toll and some of them are in danger of sudden and complete collapse. Much repair work is needed, and soon, but it cannot be done without many modest and some very large contributions. Our hope is that by opening up the site and getting started, the need will become apparent to those who can help to meet it. We shall be probing the buried levels for information on origins of perhaps 2,500 years ago and on the growth of Maya civilization thereafter. We shall be "saving" the great temples and palaces at the surface by recording them on paper. But we want also to save them actually, a task which we owe to the future. There is a great chance here for those who are fascinated by the great monuments of the past. The success of the more ambitious part of our plan depends on them.

If we succeed, Tikal will become a breath-taking experience for countless people, and it will teach them directly that a stone-age technology and a hostile environment did not here prevent development of true civilization.



Fig. 15. The youngest member of the crew, much pleased with himself. For most *Peteneros* meat is a luxury, as it was for the ancient Maya. This armadillo was good for six full stomachs. Sometimes deer or wild pig are bagged, but large birds such as wild turkey are more common.

Fig. 16. The first of some 200 snakes collected by our workmen for University of Michigan scientists who collaborated the first season. Meeting such creatures among the ruins helps one to understand how the serpent could play a leading role in ancient Maya art. It is hoped that our Tikal settlement will become a base for intensive studies of the environment in all its aspects. It must be about the same as in ancient times.



Fig. 17. Baby spider monkeys. Monkeys were among the animals painted on pottery of the Classic Period and so help to prove that Tikal was built in the same forbidding tropical rain forest which now hides its ruins.



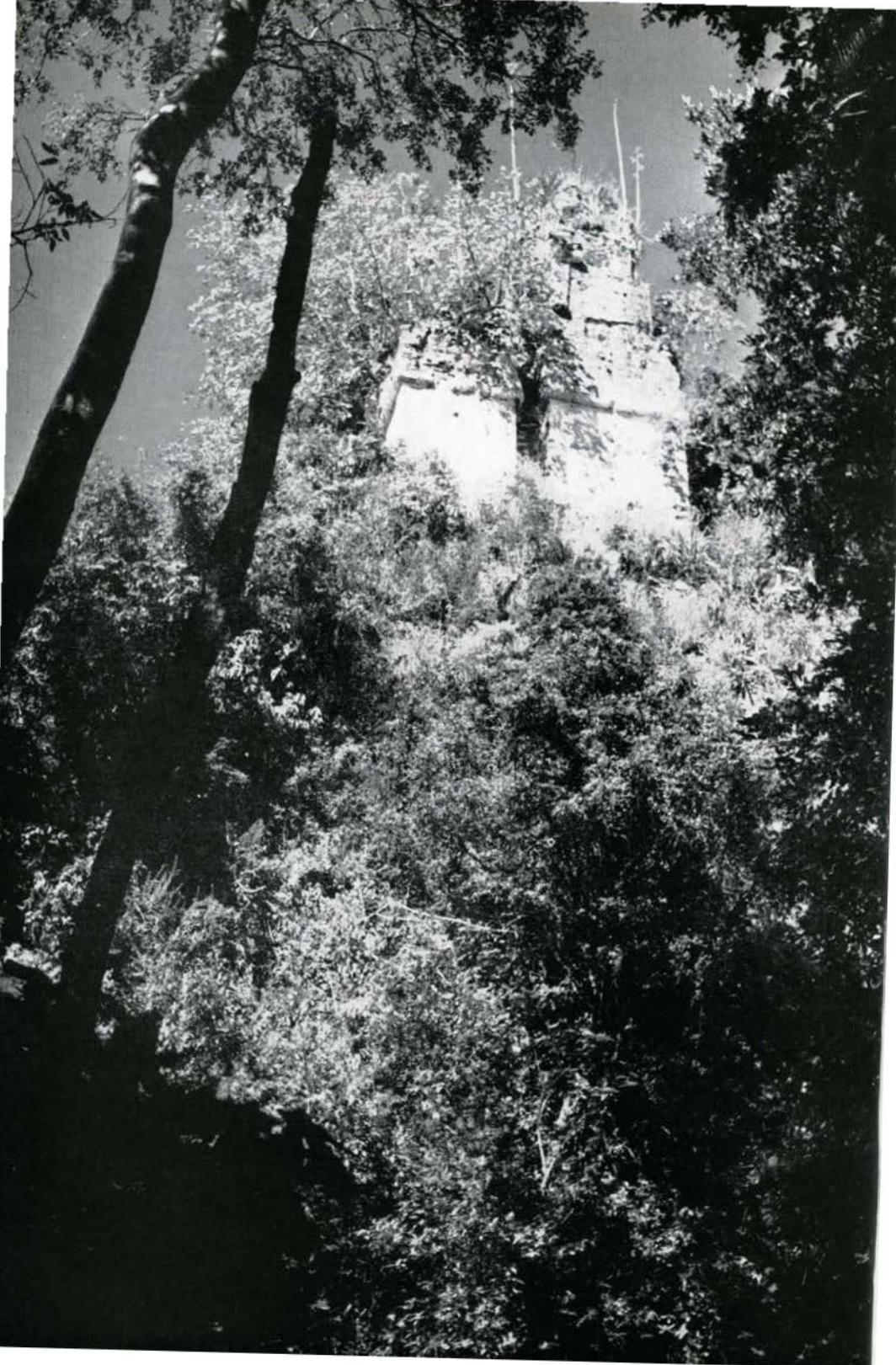


Fig. 18. (*Opposite page*) Great Temple I from the side before bushing. Tikal is a site of many temples, of which six have been called "Great" because of their size or height. This one faces (on our left) the "Great Plaza," which is at the center of the site. Before "bushing" only the temple building and its ornamental "roof-comb" are visible.

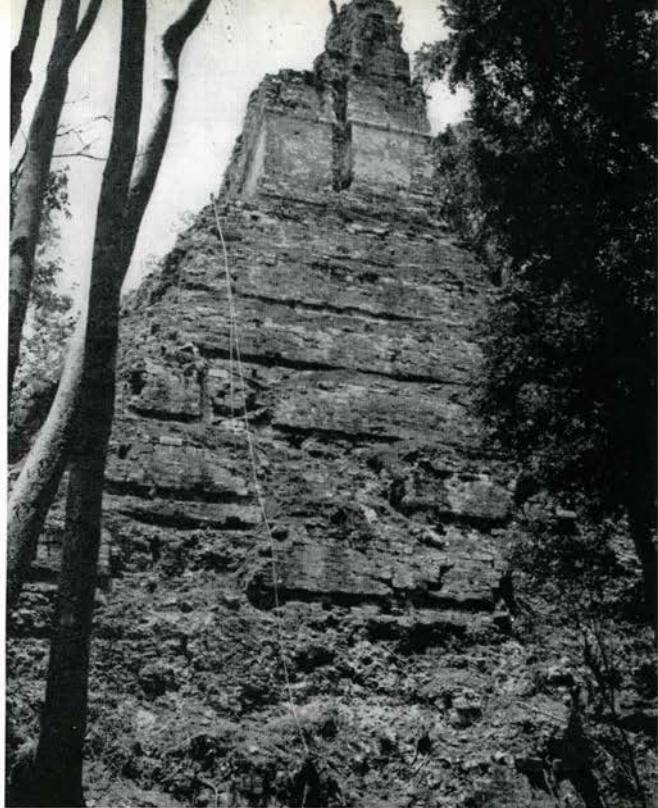


Fig. 19. (*Upper right*) Great Temple I, side view after bushing. Given the resources, further disintegration of this magnificent structure can be stopped. It will be a big job. As with Maya temples generally, the terraced "pyramid" is a solid base for the vertically walled temple building.

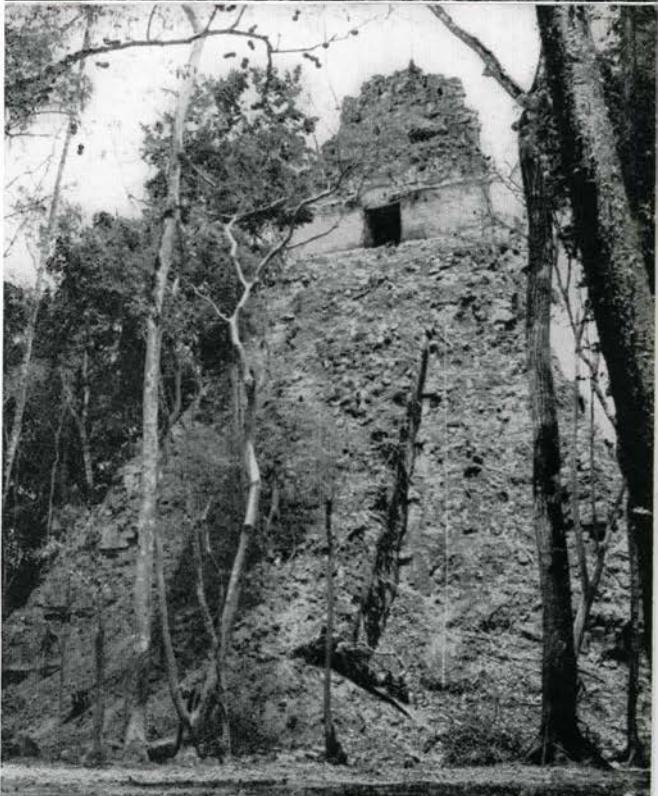


Fig. 20. (*Lower right*) Great Temple I, front view. The ruin of the great stairway leads up to the single doorway of the building. Note the steep slope of the terraced pyramid, a Tikal characteristic which accentuates the impression of height.

Fig. 21. Doorway and "roof-comb" of Great Temple II. We are at the top of the pyramid, 70 feet above the plaza. Carved wooden lintels were torn out of the doorway long ago, so that the masonry which they supported has fallen.

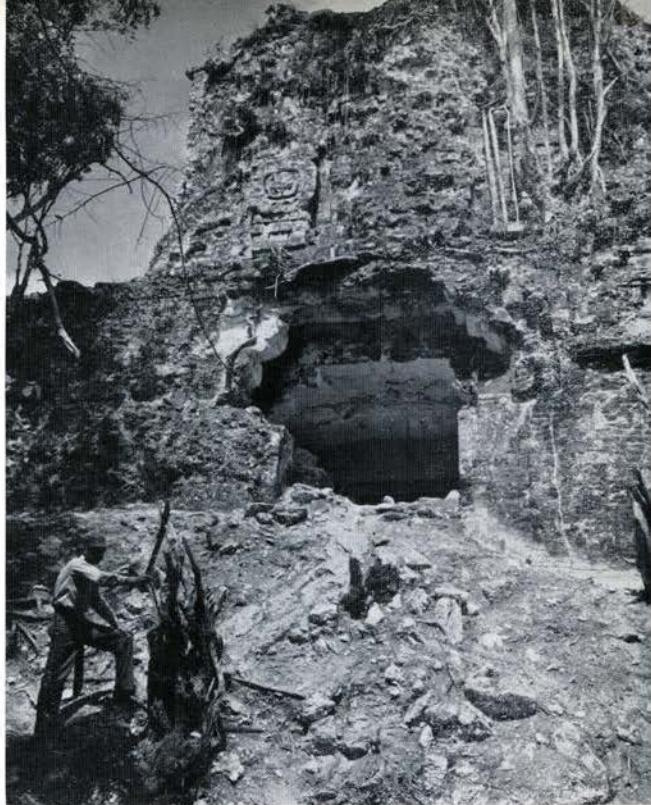


Fig. 22. (*Left*) Detail of roof-comb, Great Temple II. This view gives an idea of the large scale of the stucco reliefs on Tikal temples. The climber's left hand is on the left ear ornament of the central mask shown in the restoration drawing of this structure. The picture also gives some idea of the difficulties we face in getting accurate scale drawings of what survives. Movable scaffolding is needed in quantity.

Fig. 23. (*Opposite page*) Restoration drawing of Great Temple II. Reproduced by permission of Carnegie Institution of Washington. This structure faces Temple I, on the opposite side of the "Great Plaza." The drawing is by Tatiana Proskouriakoff, based on data obtained for Carnegie Institution by Shook, in 1942. The stucco relief sculpture on the great "roof comb" is based on portions which have survived, and on what is known elsewhere.





Fig. 24. Rear and side of Great Temple III. Note the mask on the back of the high roof-comb. Unless repairs are undertaken soon this building will collapse.



Fig. 25. Back of a small Tikal temple building. The façades of Maya buildings usually consist of two zones, apart from the roof-comb if present. The lower zone tends to be plain, but the upper one, like the roof-comb, may carry a stucco relief design. As here, with careful work much of the design may be recoverable, and further disintegration prevented by consolidation with cement.

Fig. 26. Interior of room of palace-type Structure 10. Tikal is unique in having many buildings like this in which wooden elements have survived. We anticipate a major program of dating the buildings by the new radiocarbon method. Note the wooden lintel, and the ornamental transverse beams joining the walls and sloping faces of the corbel-vaulted ceiling.

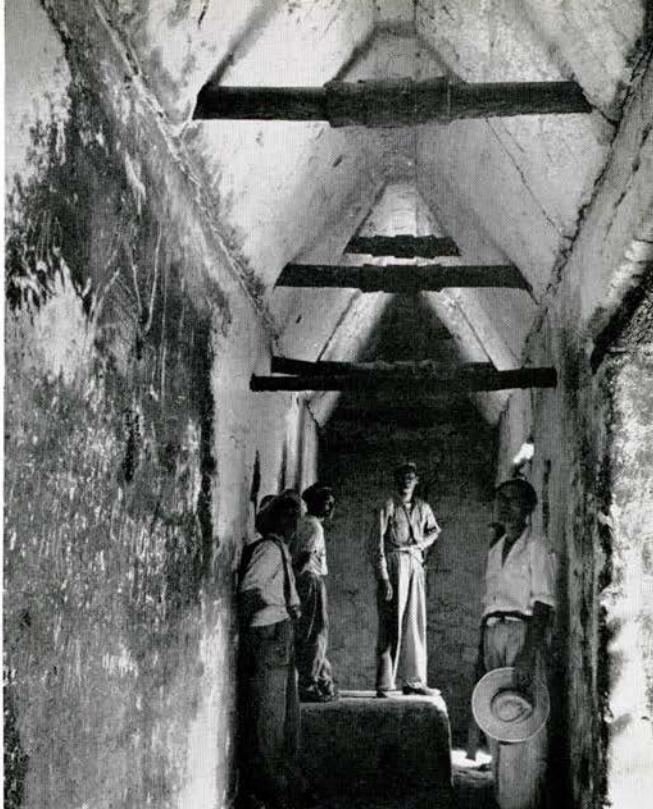


Fig. 27. Ruined façade of Structure 14, a two-story "palace." Buildings of this type were usually more readily accessible than temples. This one is one of many grouped around several courts forming the "South Acropolis" on one side of the "Great Plaza." Like the court itself it has been cleared except for large trees.

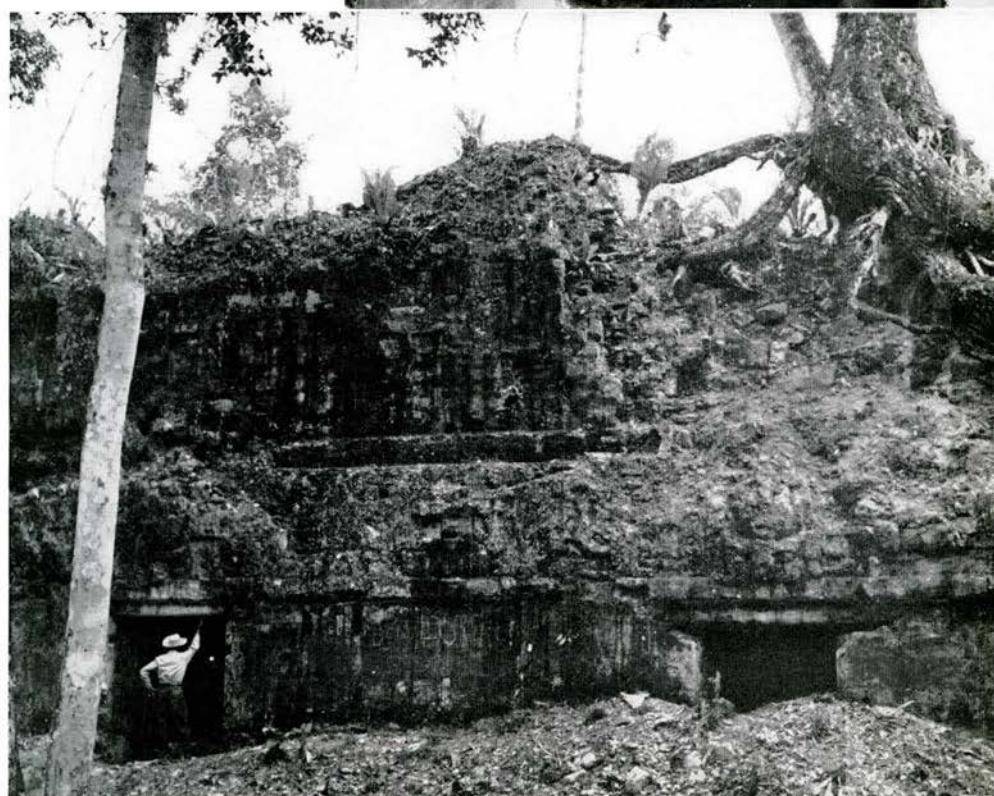




Fig. 28. Standing and fallen stelae in the "Great Plaza." Eighty-nine stelae have thus far been found at Tikal, but only 22 of them were carved. Nearly half of the total were massed at the north of the "Great Plaza." The camera looks toward Great Temple I; Temple II is close behind us. The fallen stela at the left is one of the oldest, while the elaborately carved shaft beyond is the latest. We hope to re-erect all fallen stones in this important group. Many had thick disk-shaped altars before them and a few of these were carved.