MONOLITHIC AXES AND THEIR DISTRIBUTION IN ANCIENT AMERICA

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THE object of this paper is to bring together, for comparative purposes, outline drawings of stone objects, each representing an axe and its handle carved from a single stone. Although a few specimens of this character have been known for more than forty years, it is thought that the widespread distribution of this peculiar type of artifact has not hitherto been brought to the attention of students. (See sketch map, fig. 1.) Many of the twenty-four specimens here represented are illustrated for the first time. More than half of the monolithic axes which we have thus assembled are from the West Indies. Six are shown from the southern part of the United States, but there are several of which we have not been able to obtain information respecting the exact localities whence they came. Two are from the northern shores of South America, and three are from the eastern coast of Central America.\(^1\) With a single exception, the axes are all of the massive polished type.

On the accompanying plates these monolithic axes are grouped by regions. The first to be described (pl. 1, fig. 1) is the only chipped flint specimen in the series; it was found about twenty years ago in a remarkable cache discovered near Painted Rock in the region of Duck river, Humphreys county, Tennessee, in the center of the stone-grave district. The ceremonial character of the cache is indicated by the general occurrence of its objects in pairs, among which were two examples of monolithic axe, respectively 8\(\frac{3}{4}\) and

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\(^1\) The axes now referred to do not include the double-blade examples illustrated on plate yi.
9 inches in length. Both of these axes are now in the collections of the Missouri Historical Society, St. Louis.\(^1\)

The first of the series of polished specimens, shown in figure 2

![Sketch map showing distribution of monolithic axes.](image)

**Fig. 1.**—Sketch map showing distribution of monolithic axes.

\(^1\) These chipped flint ceremonial objects have been described and figured by W. J. Seever, who secured the cache for the Missouri Historical Society, St. Louis, in whose collections they are now exhibited. Mr. Seever writes about this pair as follows: "Figs. 5 and 41 are certainly 'ceremonial.' . . . The form seems unique and at once suggests a sort of medieval, European battle-axe and war club combination. Both are exquisitely chipped and as near alike as two peas. The head being flat and considerably thinner than the handle, which is quite slender and rounded, the inference is drawn at once that they were used with the hand. The upper edge, has an odd,
MONOLITHIC AXES FROM SOUTHERN UNITED STATES
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States; it was found by Charles S. Mason in the vicinity of Jonesboro, Polk county, Tennessee. [This axe is carved from a hard, green stone, and is 12¼ inches long. The handle is quite massive and has a slight expansion near the end. In this specimen the marked representation of the insertion of the blade in the handle is not shown, the axe blade and handle being merged into a solid, flat, carved implement.]

The next of the series (pl. 1, 3) is now in the United States National Museum. An illustration of this specimen was published in 1896 by Thomas Wilson, but the locality was not given. However, it is the axe mentioned by Thruston, in his Antiquities of Tennessee, as being in possession of Mr Morris of Mississippi county, Arkansas, and it was found in the Calvary mound in that county. It is 13¾ inches long, is made of olive-green diorite (?), with a medium polish, and is complete except for a few rough places. The edge is chipped apparently by use.

The axe shown in figure 4 of this plate may be regarded as the type specimen of this class of objects from the United States. It was first illustrated and described by Col. C. C. Jones in his Antiquities of the Southern Indians, published in 1873, and it is figured also by Dr Joseph Jones in his Explorations of the Aboriginal Remains of Tennessee, but in this work the drawing is different from that appearing in the former. This is known as the flaring, axe-handle-like projection with a very keen edge, the lower edge three equally wicked and keen semicircular projections and indentations. They have been better illustrated by Moorehead in The Stone Age in North America, figs. 161–162.

4 C. C. Jones, Jr, Antiquities of the Southern Indians, 1873, pp. 280–281, pl. xii. Jones writes that an axe similar in material to the Jones axe was found about the year 1863 in a grave mound in York district, South Carolina. The present whereabouts of this axe is unknown to the writer.
5 Joseph Jones, "Explorations of the Aboriginal Remains of Tennessee," Smithsonian Contributions to Knowledge, 1876, p. 46, fig. 11. The entire collection made by Dr Jones, on which this monograph is based, is now in the Museum of the American Indian.
Jones axe, having been found by Dr Joseph Jones in the exploration of a mound on the eastern bank of Cumberland river, opposite Nashville, across from the mouth of Lick branch. This mound was about 10 feet high and 100 feet in diameter. In the center, three feet from the surface, was a sacrificial altar surrounded by a circle of stone graves. Near the altar, on the southern slope of the mound, were two skeletons, one of a male and the other of a female, not, however, in stone coffins. Under the skull of the male skeleton Dr Jones found the monolithic axe under consideration. This specimen is cut out of a solid piece of a compact, green, chloritic stone, and is 13\(\frac{3}{8}\) inches long. At the lower end is a hole, possibly for the attachment of feathers when the axe was used in ceremony. It is now in the Museum of the American Indian.

One of the most extraordinary specimens of monolithic axe has been figured and described recently by Mr Clarence B. Moore in his monograph on *Certain Aboriginal Remains of the Black Warrior River, Alabama.* Mr Moore states that it was found by a colored man in plowing near one of the larger mounds at Moundville, formerly known as Carthage. This splendid axe (pl. I, 5) is of highly polished amphibolite, and measures 11.6 inches in length. It has a ring at the end of the handle like the Jones axe above mentioned. The backward curve of the handle at the upper end above the blade is characteristic of the handles of axes with copper or stone blades in ancient Mexico, as shown in the numerous representations in the codices, and which still exist, the copper blade being replaced by either iron or steel. The feature referred to, but in lesser degree, is characteristic of a number of monolithic axes from the West Indies, and is present in a stone axe with a wooden handle now in the collection of Lady Blake (pl. II, 4). This monolithic axe was obtained by Mr Moore and is now in The Academy of Natural Sciences of Philadelphia. In every respect it is one of the most beautiful and interesting examples of this class of objects that has yet been found.

THREE MONOLITHIC AXES AND A PETALOID CELT WITH A WOODEN HANDLE, FROM THE BAHAMAS
The splendid axe exhibited in figure 6 is in the Yale University Museum, and we have to thank Professor George Grant MacCurdy for the drawing. The locality of the specimen is not positively known, but it can be reasonably attributed to the same general region in which, from time to time, the other monolithic axes shown on plate I have been found. This axe is 11 7/8 inches long, and has been broken into three pieces. The handle has a hole in the end, as in the case of the Jones and Moore axes, and is rounded below the blade like the Moore axe. A unique feature is the sculptured human figure bent backward over the upper end of the handle, the well-carved head, which recalls certain Mexican masks, resting upside down and touching the butt-end of the projecting blade. In workmanship the Moore and Yale University axes are so similar in type that in all probability the same provenance should be ascribed to them.

In plates II to IV are illustrated the monolithic axes from the West Indies. In 1906 Dr Hamy published an article illustrating seven specimens from the Antilles that had come to his notice. It will be observed from our study that by far the greater number of axes of this class are from the restricted area included in the lower islands of the Bahamas, Cuba, and the island of Haiti and Santo Domingo. Indeed, of the twenty-three polished stone monolithic axes herein figured, thirteen are from this part of the Antilles. Although there are thousands of stone axes from the West Indies in the collections of the Museum of the American Indian, no monolithic axes have thus far been discovered in any other part of the Antilles. We have yet to find an example in Jamaica, Porto Rico, or the Lesser Antilles.

We will now consider these West Indian examples. The first, shown in plate II, fig. 1, was discovered by Mr Theodoor de Booy in a cave at Juba Point, Island of Providenciales, in the Caicos


group of the Bahamas. This axe, which is of serpentine (not jadeite), is $7\frac{1}{2}$ inches long, and was found with potsherds, several pieces of charred wood, bones, and several conch-shells, buried beneath about eighteen inches of cave earth. The specimen is in the Museum of the American Indian.

In the private collection of Lady Blake, whose husband was formerly Governor of Jamaica, is the monolithic axe shown in plate II, 2. It is $7\frac{1}{2}$ inches long, and has been figured by Cundall.\(^1\) This specimen was found in a guano cave deposit at Conch Bar, Grand Caicos, by a Mr Murphy of Grand Turks island.

No. 3, similar to the last, is now in the American Museum of Natural History. It was long the property of George J. Gibbs, Spanish consul at Grand Turks island, was lent to the Smithsonian Institution for the purpose of making a cast, and was first figured and described by Mason\(^2\) in 1876. Mason says that it was found in a cave in Caicos or Turks island, a rather ambiguous statement when we consider that the Caicos islands form a small group of keys, or cayos, of which Turks island is one of the smallest. Information which came with the specimen when it was purchased by the Museum, through the intermediary efforts of the late Frederick A. Ober, establishes the place of its finding in 1874 at Blue Hills on that island of the Caicos group which bears the name of Providenciales, not far from Juba Point where the de Booy axe was found in 1911. The Gibbs axe is $9\frac{3}{4}$ inches in length and is cut from a very hard, light-green stone, called jadeite by Mason; but as no analysis has yet been made, the material is uncertain. Like the Lady Blake axe it is fashioned to show the petaloid celt inserted in, and the pointed end projecting through, a stout handle.

In the paper above referred to, Mason figures a unique example of a petaloid axe still in the original handle of wood,\(^3\) one of the treasures of the Lady Blake collection. It was found in Caicos, and when first described by Mason in 1876 was in possession

\(^1\) Frank Cundall, "The Story of the Life of Columbus and the Discovery of Jamaica," *Journal of the Institute of Jamaica*, vol. II, no. 1, Sept. 1894, fig. 7.


\(^3\) Op. cit., fig. 12.
MONOLITHIC AXES FROM SANTO DOMINGO
of George J. Gibbs. It has also been figured by Cundall.\textsuperscript{1} Our drawing (pl. II, 4) is from a photograph kindly furnished by Lady Blake. The handle is of lignum-vitæ, 23 inches in length. Cundall writes that "it was found in a cave at a village in Middle Caicos, under some five feet of cave earth, and was broken by the labourer in digging it out. The accumulation of the cave earth is of very slow growth, and possibly the hatchet is several hundreds of years old, especially when we remember that the native Indians were all removed by the Spaniards soon after their discovery of these islands." It will be noted that the end of the handle, where the stone blade is inserted in a mortise, is larger than the shank, which ends in a knob. This feature is present also in the monolithic axe of the Lady Blake collection. Another interesting feature is the projection of the pointed end of the blade through the handle, as is the case of all the monolithic axes shown on plates II to IV, with the single exception noted elsewhere.

In 1903 Dr Fewkes obtained the axes shown in plate III, 1, 2, 3; they were purchased from Archbishop Meriño of Santo Domingo, and are now in the United States National Museum.\textsuperscript{2} No. 1 is different from any other in the series here described, in that the entire handle is curved in crescentic fashion, the cutting edge of the blade being in the inner curve. This axe is 9\(\frac{1}{4}\) inches long. No. 2 is almost cruciform and is 7\(\frac{3}{4}\) inches in length. No. 3 is 9 inches long and in form resembles closely the Providenciales and Cuban monolithic axes. These three examples from Santo Domingo have also been figured by Hamy.

The two monolithic axes shown in plate III, 4, 5, belong to a distinct type. They are now in Paris and have been made known to us by Dr Hamy.\textsuperscript{3} Both were found near Santo Tomás de Janico, in the province of Santiago, Santo Domingo, almost in the

\textsuperscript{1} Cundall, op. cit., p. 68, fig. 10.

\textsuperscript{2} Dr Fewkes has illustrated these axes in his "Preliminary Report on an Archaeological Trip to the West Indies," Smithsonian Miscellaneous Collections (Quarterly Issue), vol. 45, 1903, p. 117, pl. xxxix; also in his more extended monograph, "The Aborigines of Porto Rico and Neighboring Islands," Twenty-fifth Annual Report, Bureau of American Ethnology, pl. xiv.

\textsuperscript{3} Hamy, op. cit., figs. 5 and 6, pp. 7–8.
middle of the island. No. 4 measures 9 inches in length, while No. 5 is but 6 inches long. Each of these two specimens is characterized by the presence of the sculptured head of a monkey at the top of the handle, and they are the only examples of this type that have been found in the West Indies.

The last axe shown in plate III (fig. 6) is also from Santo Domingo, and was collected at Andrés, not far eastward from the city of Santo Domingo on the southern coast of the island. This specimen, which is now in the Museum of the American Indian, is broken, the greater part of the handle and the pointed projecting end of the celt being missing. It is, however, the most perfectly finished axe of this class that has yet been found in the Antilles. The fragment is 5¾ inches high, and, judging from the proportions of the complete examples in our series, the axe when entire must have been at least 12 inches long, and therefore one of the three largest monolithic axes from the islands. The upper end of the handle is slightly curved, and has two grooves on the side through which the end of the celt is represented as protruding. A further attempt at ornamentation is seen in the lines over the part of the handle at the junction of the celt.

A single example of monolithic axe has been discovered in Cuba (pl. iv, 1), and has been figured by Montane in his paper "L'Homme de Sancti Spiritus." Although the locality is not given, it is probably from the eastern part of the island. This axe is 7¾ inches long, and is rudely shaped, presenting no points of special interest. It follows somewhat closely the lines of axes of this type from the Antilles, and may be compared with the axe from Providenciales (pl. ii, 1) as well as one from Santo Domingo (pl. III, 3).

In his treatise on monolithic axes from the Antilles, Dr Hamy figures the specimen shown in our plate iv, no. 2, which is now in the Musée Cinquantenaire, Brussels. It is 8 inches long and is analogous to many of the West Indian specimens, but its prove-

1 Montane's paper appears in Compte-rendu du XIIIe Congrès International d'Anthropologie et d'Archéologie préhistoriques, Session de Monaco, 1908.
2 Hamy, op. cit., fig. 7, p. 9.
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niance is not known. So far as can be judged from the drawing presented by Hamy, the unique feature of this axe appears to be the double-edge character of the blade.

The remarkable axe shown in plate IV, 3, has been figured by Joyce. It is carved from solid, fine-grained, pale-greenish stone, is well polished, and measures $12\frac{7}{16}$ inches in length. There is no definite information respecting the island of the Antilles whence it was brought, but it has been in the British Museum since 1830.

The largest and in most respects the most important monolithic axe from the West Indies is figured in plate IV, 4. The original is in possession of a private collector, but there is a cast in the Peabody Museum of Harvard University. We are indebted to the Director, Mr C. C. Willoughby, for the drawing made by him for illustration in this series. This axe is from Santo Domingo, and is $14\frac{3}{16}$ inches long. Mr Willoughby suggests that the end of the handle may represent the head of a manati. In its upper section the specimen reminds us of the axe in the British Museum. An important feature to be noted is the placing of the petaloid butt-end of the blade out of alignment with the blade itself, a peculiarity observable also in both the Cuban and the British Museum examples illustrated in plate IV. In all the other monolithic axes from the West Indies, and indeed in all the axes in our series in which the end of the blade is represented as projecting through the handle at all, the axe is represented as if continuing through naturally, as in the case of the one with the wooden handle from the Bahamas shown in plate II, 4.

The two examples of monolithic axes from South America are in the American Museum of Natural History. They are illustrated in plate V, 1 and 2, and are among the smallest of the entire series. Figure 1 lacks the end of the handle and is now 5 inches long; figure 2 is $6\frac{5}{8}$ inches in length. These are both of argillite and were found together in a grave near Rio Don Diego, Province of Santa Marta, Colombia, near the coast between the

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cities of Santa Marta and Rio Hacha. These specimens are the only monolithic axes from South America that we have been able to trace, and belong to a class thus far known only in this particular region. The ends of the axe blades do not extend through the handle as in all the other specimens thus far described in this paper. A distinctive feature is the almost flat handle and the slight broadening at the junction with the blade.

We will now present three examples of monolithic axes from Central America that have not hitherto been described or illustrated. Plate v, 3, formerly in the Joseph Jones collection, is now in the Museum of the American Indian. The only history of the specimen is a note in the original catalogue by Dr Jones to the effect that it came from Honduras. Inasmuch as Dr Jones, living in New Orleans until his death, was in close touch with Honduras through the frequent arrival of steamers engaged in the fruit trade from Puerto Cortéz, he acquired a number of valuable specimens from that republic. The axe in question is carved from a heavy, compact, brownish-green stone; it is $9\frac{3}{8}$ inches long, and the unique rounded handle averages $1\frac{3}{8}$ inches in diameter. The particular features of this axe are its high polish, the curved handle, the two transverse grooves at and above the blade and the groove around the base of the handle. The blade is not represented as projecting through the handle, but, judging from its shape, the petaloid type of blade was doubtless intended to be imitated.

The two monolithic axes illustrated in plate v, 4, 5, have just come to our attention. Both are from Bluefields, Nicaragua, and have only recently been added to the collections in which they are now exhibited. No. 4 is in the United States National Museum, and we are indebted to Professor Holmes for the drawing and a note concerning it. This axe is of indurated volcanic tufa and is 12 inches long; it was collected by J. O. Thomas, of Bluefields, who obtained it from a Mosquito Indian chief in eastern Nicaragua. The blade, which is unlike any other in the series, with the exception of that of the axe shown in figure 5 of the same plate, reminds us somewhat of certain axes from the Lesser Antilles and northern South America. As in the specimen from Honduras (pl. v, 3), the handle is rounded and curved, but, unlike it, the curvature is at
the base and not at the upper or blade end. Around the upper part are two bands, possibly designed to represent binding. There is also a band or ridge around the middle of the blade.

The last figure of the plate (no. 5) shows one of the most remarkable axes of the entire series. Mr C. C. Willoughby has kindly furnished us a drawing of the specimen, which is in the Peabody Museum of Harvard University. This axe, which measures 12½ inches in length, was found in an excavation made for the foundation of a building at Bluefields. The blade is practically identical with that of the axe shown in figure 4. The rounded handle is decorated with three series of longitudinal grooves and with three transverse oval depressions over the section adjacent to the blade; above this point the handle is highly recurved. Apart from the more elaborate finish, this axe in its general features is identical with the other axe from the Mosquito shore, and the stone of which it is made is similar to that of the Honduras specimen. The three Central American axes are alike in not having the blade represented as projecting through the handle, but, as has been demonstrated, they represent two distinct types of blades.

Not originally included in our study of monolithic axes of the single-blade type are several examples of an entirely distinct variety in that they are characterized by a double blade (pl. vi). Although these do not belong to the series which we have considered, it has been thought desirable to place them on record in this paper. They are all from Nicaragua.

The example which thus far has served as a type is the beautifully shaped specimen shown in figure 1. It was discovered by Frederick Boyle in 1816, and figured by him in his work, A Ride Across a Continent.¹ The illustration has been copied by Bancroft² and others. Boyle evidently saw several axes of this kind, but so far as determined he obtained only the specimen here figured. He writes: "A double-bladed axe was offered us for sale in Libertad, which for beauty of workmanship and regularity of design might be compared with the best of European specimens." The specimen under consideration, he writes, "was found in a Chontal grave,"

¹ Frederick Boyle, A Ride Across a Continent, vol. ii, p. 144, fig. 1.
and he further states that it is in the British Museum. Through the kindness of Mr T. A. Joyce we are enabled to present a new drawing from a photograph of the specimen, which seemingly is of volcanic stone and measures $17\frac{3}{4}$ inches long by $12\frac{1}{4}$ inches in width across the blades. The end of the handle is perforated. The old settlement of the Chontales is in the mountainous region between Lake Nicaragua and the headwaters of the Rio Carca, which discharges into the Caribbean sea near the present town of Bluefields. This territory is now designated as the Department of Chontales.

Through the courtesy of Professor Holmes we are enabled to illustrate two interesting double-blade axes (pl. vi, 2, 5) recently acquired by the United States National Museum. They are both fashioned from an igneous rock, possibly diorite. The axe shown in figure 2 is $8\frac{3}{4}$ inches long by $7\frac{5}{8}$ inches across the blades, and, like that illustrated in figure 1, is perforated through the end of the flat handle. Figure 5 is of a slightly different form, being of greater length ($10\frac{3}{8}$ inches), and narrower across the blades ($6\frac{1}{4}$ inches). The handle, too, is rounded, and has a conical end. These two axes were obtained from a Mosquito chief in eastern Nicaragua by the late J. O. Thomas, of Bluefields.

The end of the handle of the axe shown in figure 3 is missing, and the right blade is irregular, in which respect it differs from the others shown in plate vi. This specimen is in the American Museum of Natural History, to which it was presented by Mr A. D. Strauss with a collection of Nicaragua pottery.

This study has brought out several clearly defined types of monolithic axes from different culture areas. The large axes from southeastern United States are all of the same general form, characterized chiefly by the attempt on the part of their makers to represent the poll of the axe as projecting through the handle. In all examples of this type the pointed end is cut off, resulting in the well-known celt form so widely distributed in the United States. Furthermore, three of the five examples of polished axes of this class are perforated at the end of the handle, while another of the series shows the end cut in such fashion as to indicate the
DOUBLE-BLADED MONOLITHIC AXES FROM NICARAGUA
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possibility of similar treatment having been suspended before completion. Hence these two features seem to distinguish the axes from this region.

The blades of all the axes from the Antilles are represented as protruding through the handle, and with a single exception the poll is pointed, thus preserving the character of the petaloid celt so common throughout the Antilles. In the axes from this culture area there is greater variation in size and form than is found in those from the adjacent mainland of the United States.

The two axes from Colombia fall into another class, being rather small, while the poll of the blade appears as if imbedded in the handle rather than projected through, as in the Antillean specimens.

Finally, there are the three types from the Mosquito coast region of Nicaragua and Honduras, characterized respectively by the curved handle, the peculiar "imbedded" blade, and the double blade. The blade of the second of these Central American types seems to be foreign to this region, as to our knowledge no isolated blades of this kind have been found in Central America.

In assembling the data pertaining to the subject of this paper, we have examined the great collections of stone axes from various parts of North and South America and have consulted various persons concerning the distribution of true monolithic axes. It seems safe to state that in South America no monolithic axes have thus far been found, with the exception of the two from Colombia above described. When our attention was first drawn to the distribution of this form of axe, we believed with Dr Hamy that it might be possible to follow the line of distribution and "attempt to establish the landmarks of some route followed from the continent [South America] to the Antillean islands in far-distant times by an ancient race." 1 In view of the widely different types of monolithic axes, and the great gaps in a possible land and water migration route where they are not found, we feel forced to abandon this theory as untenable and to leave the matter undetermined until we know more of the archeology of the Antilles, northern South America, and the Caribbean coast of Central America.

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1 Hamy, op. cit., p. 11.
CONTRIBUTIONS
FROM
THE MUSEUM OF THE AMERICAN INDIAN
HEYE FOUNDATION

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1. *Lucayan Artifacts from the Bahamas.* Theodoor de Booy.
2. *Precolombian Decoration of the Teeth in Ecuador, with some Account of the Occurrence of the Custom in Other Parts of North and South America.* Marshall H. Saville.
5. *Note on the Archeology of Chiriqui.* George Grant MacCurdy.