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Reviewed work(s):

Source: *American Antiquity*, Vol. 25, No. 3 (Jan., 1960), pp. 381-391

Published by: [Society for American Archaeology](#)

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A PRELIMINARY REPORT ON PETROGLYPHS IN PUERTO RICO

MONICA FLAHERTY FRASSETTO

ABSTRACT

Antillean petroglyphic art reached its highest development in the technical excellence and lively artistic expression of the many petroglyphs in Puerto Rico. This report is the beginning of a systematic study of Puerto Rican and Antillean petroglyphs which is intended to trace stylistic developments through the Antilles to South American points of origin. Sixty surface prints were made at 13 sites in three regions of Puerto Rico, but only those from Salto Arriba, Icacos, and Caonillas are discussed in detail. The simple and accurate, though time-consuming method of surface printing is fully explained. There are two distinct local types or styles of petroglyphs in addition to the simple curvilinear and abstract designs. The swaddled infant type appears at least as early as Rouse's Period III and represents the beginning of a local petroglyph style. The later Capá type reaches its final stage during Period IV. This study confirms Rouse's placement of the Puerto Rican petroglyphs in his Periods III and IV (A.D. 350-1584), and demonstrates the development of local petroglyph styles parallel to the development and spread of Taino culture.

ALTHOUGH considerable material has been published about the archaeology of Puerto Rico, as yet no independent systematic study has been devoted to the petroglyphs of that island. These rock carvings are found on river boulders, walls of caves and rock shelters, and on upright stone slabs associated with aboriginal "*juegos de bola*" or dance plazas. Unfortunately many of the latter have been carried off by collectors. Caves have also been rifled. Sites being abundant, however, there is still plenty of undisturbed material for the student. In the Antilles, Puerto Rico is the place where petroglyphic art reached its highest development. Fewkes (1903-04: 150) sets it at a higher technical level than the petroglyphic art of North America, north of Mexico.

Technical excellence and lively artistic expression, however, do not enable us to decipher the meaning of these theriomorphic and "abstract" symbols. We are handicapped by the absence of historical reference or legend concerning them. In South America, for instance, the Indians could not (or would not) tell early European explorers who made the petroglyphs there or what they meant, saying either that they were the work of the "Great Spirit" or shrugging them off as the handiwork of women

(Schomburgk 1841: 147; Im Thurn 1883: 402).

In Puerto Rico, we can at least hope to trace certain stylistic developments as (and if) they occur in relation to other Antillean areas and points of origin in South America. Assuming the correctness of Rouse's dating of the Puerto Rican petroglyphs (Rouse 1949: 501-2; Cruxent and Rouse 1958) to within the last two periods of his time scale for Puerto Rican prehistory (Periods III and IV, A.D. 350-1584), then a local style development corresponding to the evolution of the "Taino" culture which developed in Puerto Rico and spread westwards during those periods, should be discernible in the island's petroglyphic art. To demonstrate this through the advantages of more accurate recording is the main concern of this report.

It is generally agreed that the Island Arawak or "Igneri" originally came from South America, their language and basic cultural elements being Amazonian (Rouse 1948: 507). It is estimated that they took off from the east coast of Venezuela about the time of Christ and entered the West Indies by way of Trinidad and the Lesser Antilles, bringing with them pottery and agriculture but none of the ceremonial apparatus with which the Taino culture of Puerto Rico is identified. According to Rouse (1951: 261; Cruxent and Rouse 1958) the early arrivals (A.D. 1-350) settled only on the coast of Puerto Rico and did not penetrate the interior until Period IIIb (A.D. 750-1150) when a simple form of the "zemi" cult began to appear. The population of the interior only began to exceed the coastal population during Period IVa (A.D. 1150-1500) when ceremonialism and the zemi cult were reaching their peak.

According to Rouse (1948: 535):

The Taino believed in the existence of spirits or souls, not only in their own bodies but also in some trees, rocks, and other natural phenomena. . . . The spirits of living people were called "goeiz"; those of the deceased "opia." Even during life the goeiz could leave the body; after death they went as opias to an earthly paradise called Coaibai, which was said to be a remote valley in some part of Hispaniola. . . .

The Taino believed that by obtaining control over the spirits of nature and of their ancestors they would gain supernatural power. They did this by constructing idols of wood, stone, bone, shell, clay, cotton, or gold as places for the spirits to reside. These idols were called zemis; . . . [they] were also placed in various sacred

caves, some being carved on the walls in the form of petroglyphs. The rock carvings in the open in various parts of the island may also have been zemis.

He goes on to say that among the various powers of these zemis were the influencing of the weather, foretelling future events, regulating crops, improving hunting and fishing. In legends, rocks, rivers, and mountains were worshipped as ancestral points of origin.

To be worthwhile, any investigation of the Puerto Rican engravings requires not only a thorough exploration of the petroglyphic sites in all parts of the island, but also a careful detailed scrutiny and concise visual record of each site. With this object in mind, my husband and I spent 14 days in July, 1956, recording sections of the Cueva de los Indios (known also as Cueva Islote) 5 miles east of the town of Arecibo on the north coast. In 1957, over six weeks were spent in the central mountainous interior and the Luquillo region in the east. In view of what remains, our work may be said to have only just begun. Over 60 surface prints were made in the following areas (Fig. 1):

East

- Municipality of Naguabo: three sites at various points along Río Icacos
- Municipality of Río Grande: one site on Río Espíritu Santo
- Municipality of San Lorenzo: one site on Río Grande de Loíza

Central Mountainous Interior

- Municipality of Orocovis: one site on the eastern bank of Lago de Matrullas
- Municipality of Jayuya: one site on Río Coabey, one site in Barrio Zamas, four sites at various intervals along Río Caonillas
- Municipality of Utuado: one site on Río Grande de Arecibo (Barrio Salto Arriba)

North Coast

- Several inscriptions on walls of Cueva de los Indios at Punta las Tunas, five miles east of Arecibo

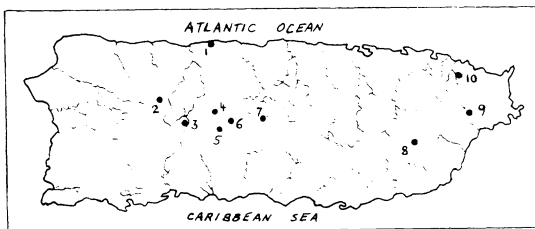


FIG. 1. Distribution of petroglyph sites in Puerto Rico. 1, Cueva de los Indios; 2, Capá; 3, Salto Arriba; 4, Caonillas; 5, Zamas; 6, Coabey; 7, Matrullas; 8, San Lorenzo; 9, Icacos; 10, Espíritu Santo.

As many more sites were explored and photographed and marked for future recording. To my knowledge, of the above sites listed, the rock shelters at Zamas and Icacos, and the sites along Río Caonillas have been hitherto unknown to archaeologists. For the purposes of this report, only Salto Arriba, Icacos, and Caonillas are discussed in any detail.

RECORDING METHODS

For recording, we applied the "surface printing" technique we had experimented with in 1955 to reproduce the petroglyphs at Reef Bay, St. John, Virgin Islands. It consists of first pre-inking the *unengraved* areas of the rock by applying a water soluble printer's ink with foam rubber rollers and stencil brushes. A sheet of a non-woven cotton and rayon material known as Webril is then laid on. Dampened sponges applied to the surface of this material will cause the ink on the rock underneath to "bleed" through. A sort of monotype print is thus obtained. This is a variation of the technique for surface printing described by Mark Hedden (1958). Water base inks are easy to apply and wash off afterwards. Also the finished print dries quickly and can soon be rolled up with a precautionary sheet of newspaper between it and the next print. Later, the print can be ironed on to a fine linen (Chartex) which is impregnated with a petroleum and rubber mixture and acts as a waterproofing agent thereby preserving the ink and generally "fixing" the print. On the whole, although our method is slower and more laborious than that described by Hedden, it is suited to a larger variety of surface conditions, rough and bumpy ones in particular. In most cases a sharper image is obtained, including details which might otherwise come out garbled.

Puerto Rican petroglyphic sites are often off the beaten track, entailing long treks up and down rivers and mountains in a climate both hot and humid. At some rock shelter sites the engravings are found all over the surface including niches and recesses, along the sharp profiles of the rock, and on the ceiling. To make plaster molds and carry the necessary equipment for them would be cumbersome and difficult. The Latex mold method would be impossible at many sites due to dampness and encrustation and because its real effectiveness is confined to horizontal surfaces. Equipment for surface

printing on the other hand, is simple and easy to carry. The versatility of the material Webril helps greatly in overcoming distortions of the rock mass. In case of very large panels or unusually sharp angles, it can be cut and later fitted together like any pattern to give us a "map" of the engraved area. As illustrations in this article show, the degree of accuracy obtained over dubious methods of freehand sketching and chalking-in is considerable. The texture of the rock is preserved and above all, the spirit and esthetic quality of the aboriginal work of art is dramatically revealed.

In view of the apparent ease with which errors can be made regarding engraved designs, one cannot overemphasize the importance of long and careful study of the rock, involving observations under varying light conditions (especially important in photography), dousing with water, and searching the more elusive grooves with foam rubber rollers. Often several days must be spent on one site. In Puerto Rico it is foolhardy to approach an inscribed rock with the idea that what one sees upon first examination is all there is to it. The field worker using the surface printing technique will appreciate this more and more as he gains experience. Weathered grooves and reflected glare from a tropical sun do much to blind the eye. Certain mechanical aids such as polaroid dark glasses are a help. In photography, polaroid, and other light absorbing filters are necessary. Slow speed color film is surprisingly efficient in showing up the presence of designs on heavily eroded surfaces. Our project being essentially a visual one, photographic coverage is important. Ideally, the field worker should be equipped with a very sharp lensed reflex camera such as the Swedish Hasselblad which has interchangeable film magazines as well as lenses, enabling one to switch from color to black and white, or alternate between two different types of black and white film depending on what the situation requires. In addition, a Polaroid-Land camera is an asset not only as a social contact but also to take on the spot test shots of the site to be recorded. A photograph on hand of the pre-inked design is a very useful guide for the print maker, especially when dealing with large and complex engravings (Fig. 2).

One is reminded of the importance of accurate visual representation when referring to what are still our chief sources for illustrations

of Puerto Rican petroglyphs (Pinart 1890; Fewkes 1903-04, Pls. 60, 61). Pinart did the most sketching, recording petroglyphs in other Greater and Lesser Antillean islands as well. Puerto Rico is represented by drawings of petroglyphs from Cueva de los Indios, Piedra Pintada at Cayey, Cueva de los Conejos near Arecibo, Cueva de Archilla near Ciales, Yauco, and Cano del Indio at Ceiba. His inaccuracy is criticised by Fewkes and indeed many of his recordings are difficult to identify with the originals. (It seems to be the custom of each new investigator to find fault with the accuracy of the former. Thus Koch-Grünberg [1907: 4] takes both Orsi de Mombello and Ernst to task; Fewkes [1903-04: 149, footnote a] dismisses Pinart who in turn scolds Ober [Pinart 1890]). A less prolific but more careful artist, Fewkes (1903-04, Pl. 60, Part 1) illustrates his version of some inscriptions found on a large boulder on the Río Grande de Arecibo in Barrio Salto Arriba, less than two miles south of the town of Utuado. These "Salto Arriba" rock carvings were presumably associated with a nearby dance plaza of which now little remains. In his drawing (reproduced here as Fig. 3), Fewkes suggests that Figure 3 *d, e* are "solar emblems" because of their "radiating lines." The same site was later visited by Rouse (1952: 495) who men-



Fig. 2. Method of surface printing a large complex petroglyph at Cueva de los Indios.

tions "human-like bodies and heads, of faces, and of geometric designs, several of which suggest the sun and the moon." Apparently for lack of a better visual representation of Puerto Rican petroglyphs, Fewkes's erroneous drawing appears again in an article on petroglyphs (Rouse 1949: 493-502). Strangely enough, compared to other petroglyphic sites in Puerto Rico, the Salto Arriba inscriptions are quite distinct. A photograph of them (Figs. 4, 5) shows quite clearly the nature of the so-called radiating lines of Fewkes's "solar emblems." Although such obvious solar symbols do exist elsewhere in Puerto Rico (Cueva de los Golondrinas, for example), in this case Figure 3 *d* could not be called such due to any emanating rays and belongs rather to the scalloped, or petaled, face type found in a number of other sites. Figure 3 *e* has turtle-like scales and would seem to represent this creature or some other scaly animal rather than the sun or the moon. The "horns" on the heads of Figure 3 *b, c* could just as well be the ears of a rabbit-like animal (this twin "rabbit" theme appears again at Espíritu Santo and rabbit-like heads are found among

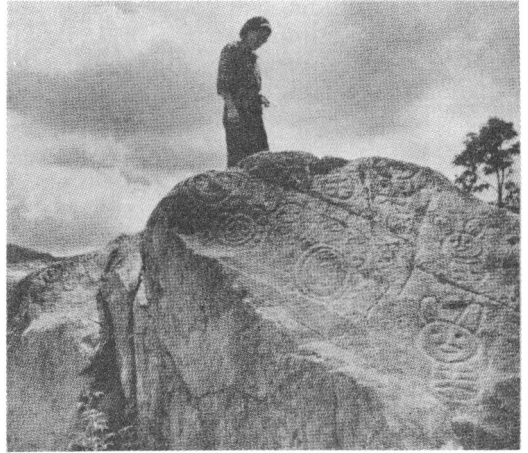


FIG. 4. Photograph of the boulder with petroglyphs at Salto Arriba. Compare Figures 3 *a, 5*.

the petroglyphs at Cueva de los Indios on the north coast and lower Río Icacos).

Fewkes overlooked a number of other engravings on the Salto Arriba boulder, including the two horseshoe-like symbols seen to the far left in Figure 4. Others are: a rain or water symbol (with vertical "tear" grooves) lying on the opposite shoulder of the rock at a point where a series of small rapids flow by, and the two heads facing each other (another recurrent theme) which lie on top of the rock (Fig. 6). Other omissions are to be seen in the surface print of the main Salto Arriba group (Fig. 5).

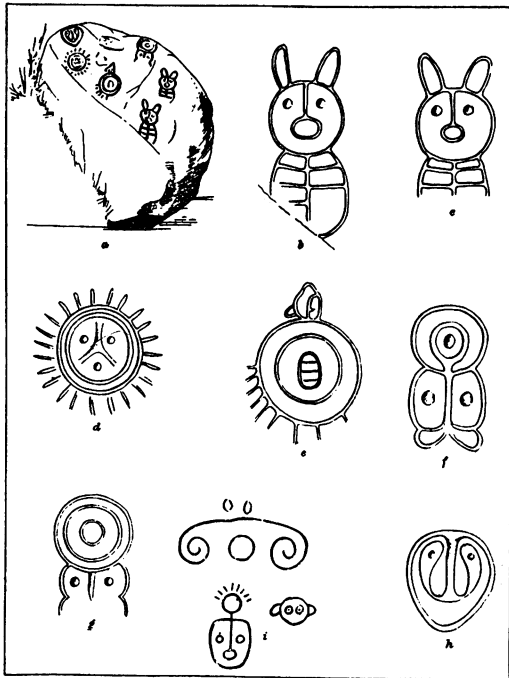


FIG. 3. Drawings of Puerto Rican petroglyphs made by Fewkes (1903-04, Pl. 60). All but *i* are from Salto Arriba. Compare Figures 4-6.

TECHNIQUES OF ENGRAVING

The Puerto Rican engravings were made on granite, granitic porphyry, quartz diorite, and limestone. At certain rocks, in the Río Icacos area and at Río Coabey, Jayuya, the Indians must have suspended themselves with lianas to make the carvings. In other cases, scaffolding or staging was probably erected. We ourselves had to do both to make recordings. A number of the river petroglyphs could only have been made during a very dry season. It was our good fortune to visit them during one of the severest droughts in the memories of the local inhabitants. River petroglyphs are found on boulders in association with rapids or waterfalls or the deep pools which form at the end of a series of rapids or waterfalls. They usually face directly across these phenomena or down river, or both. Occasionally, however, they are scattered all over the rock in every direction. We

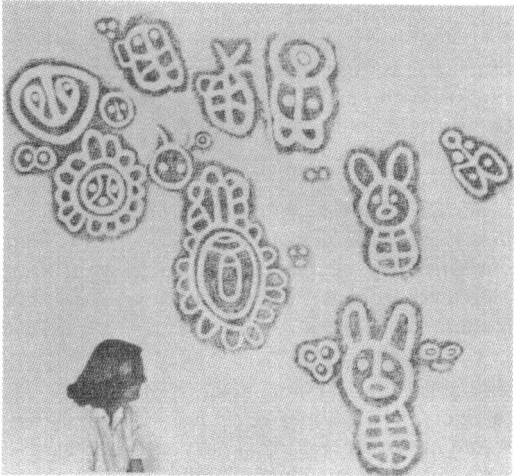


Fig. 5. Surface print of the petroglyphs on the Salto Arriba boulder. Compare Figures 3, 4.

could not find any consistent east, west, north, or south directional tendency either on cave or rock shelter walls or on river boulders. Although some river rocks are “crowded” with carvings in varying states of preservation, we have not as yet found any superimposed. Grooves, some crudely, some finely made, were for the most part pecked out with a stone tool and smoothed afterwards by friction. In a number of sites grooves vary in character according to the specific intention of the engraver. Sometimes outcroppings of the rock which are suggestive are taken advantage of, giving an added sculpturesque effect. Negative incision seems to be rarer than in South America and the Lesser Antilles.

Pecked out groove depths vary from the 1/4-inch deep and equally wide grooves of some of the designs at the Cueva de los Indios, Arecibo (Fig. 2), to the less than 1/16-inch deep and 1/4-to-1/2-inch wide groove of the petroglyphs at the Río Icacos rock shelter (Figs. 9, 10). The average, distinct, river petroglyphs are from 1/8 to 1/4 inch deep and about 1/2 inch wide. However, at two river sites, Río Icacos and Río Caonillas, we find marked variations from the average depth and width of incisions. Allowing for uneven rate of erosion and occasional sloppy or unfinished execution, there are still the persistent traces of barely legible and presumably older engravings. They occur among, and some seem to be in the same style as, the more distinct designs whose grooves, as previously mentioned,

average 1/8 to 1/4 inch in depth. We began to pick up these faint traces only after several days of working at each site and becoming familiar with the rock surfaces under varying light conditions. Matters are further complicated by the presence of one or two exaggeratedly wide and deeper-than-average engravings of the *same* style. They stand out in the manner of a too-often pencilled-over drawing. The groove has widened to 1 to 1 1/4 inch and is 1/2 inch deep (Fig. 7, upper right). A possible explanation is that these designs were re-engraved either for amusement (Koch-Grünberg 1907: 78-9) or for a specific purpose. In South America, the Cubeo Indians, primarily a fishing people of the Uaupés-Caquetá region (North-west Amazon), consider the petroglyphs at local rocky sites to be the creation of sib ancestors and

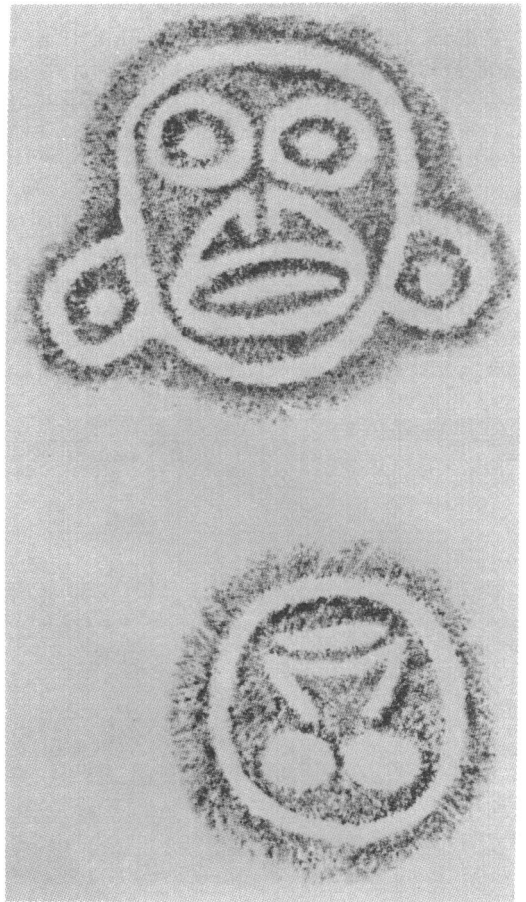


Fig. 6. Surface print of heads on top of the Salto Arriba boulder.

defend their river rights by citing the engravings as territorial validation. These petroglyphs are renewed from time to time (Goldman 1948: 784).

It is interesting to note that groove depths for the "deeply incised" type in South America are reported as follows: $\frac{1}{8}$ to $\frac{1}{2}$ inch (Mallery, after Brown, 1888-89: 144), $\frac{1}{8}$ to $\frac{1}{2}$ inch "or even more" (Im Thurn 1883: 394), more than $\frac{1}{4}$ inch "in protected places" (Farabee 1918: 168). In other words, they are the same, or if anything, deeper than the average groove depth of Puerto Rican petroglyphs. Re-engraving in South America up to and beyond historic contact could account for this and also provide an explanation for the inability of the Indians to explain the meaning of symbols of which they had merely become guardians.

DESIGN TYPES

Puerto Rican petroglyphs comprise a variety of abstract and geometric forms. Among these are: concentric circles, spirals and double spirals (clockwise or counterclockwise, three to five ringed, plain or hooked, and, at Matrullas, with a snakes head in the center), volutes and double volutes, single and double hooks, two triangles set together resembling butterfly wings, with or without pits for mouth and eyes, the cross enclosed or slightly hooked at the four extremities suggesting a swastika form, horseshoe-like symbols, series of pits loosely grouped together.

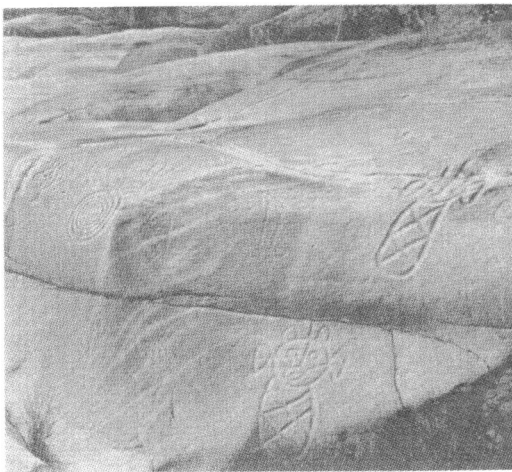


Fig. 7. Petroglyphs at Caonillas showing possible re-engraving of the swaddled infant figure on the upper right.

Of a more descriptive nature are: multi-rayed solar emblems, simple frog, lizard, iguana, and bird designs, animistic heads with rays emanating from the neck, mask-like "faces," a variety of heads or faces, human and animal, ranging from simple circles with three pits or rings for eyes and mouth, to highly conventionalized headdressed types, some with emanating scallops resembling petals or feathers. Direct comparisons may be made with petroglyphs from Northwest Brazil (Koch-Grünberg 1907) and Venezuela (Tavera-Acosta 1956).

Swaddled Infant Type. In addition to the simple curvilinear and abstract forms, are two distinct "local" types or styles. The first, very frequent in the eastern and coastal areas, is a type described by Pinart (1890) as:

... cette figure humaine paraissant emmailotée dans des langes comme un tout jeune enfant, la tête et le corps plus ou moins accompagnées d'ornements et qui se rencontrent très fréquemment ...

The two figures discernible to the right in Figure 7 and those in the surface print from Upper Icacos (Fig. 8) illustrate this type, which occurs frequently in the eastern sector of Puerto Rico. The "Temehri" type from South America (Im Thurn 1883: 395) has, in Puerto Rico, changed into a chubby grinning or grimacing large eared primarily zoomorphic "swaddled infant," the limbless body rounded and sack-like at the bottom, the ears often exaggeratedly large and of varying shapes. Some have an amusing teddy-bear quality. Many have a variety of head ornaments. It is worthwhile comparing the general outline of these large-eared figures with certain problematical artifacts found near Fancy, St. Vincent, and reproduced by Fewkes (1912-13, Pls. 10-35, 38 e, f, 39, 52 a, 56, 58 b). The artifacts from St. Vincent are presumed to date back to pre-Carib times and are described as:

... a series of fantastic objects made from metamorphosed volcanic scoria ... several hundred specimens ... found in a restricted area near Fancy at the base of the volcano La Soufriere. Nothing like them has been found in the adjacent islands, and it is quite probable that they were made and deposited at this place as votive offerings in way of propitiation to the god of the volcano.

On the whole, the infant type and the geometric and curvilinear types such as spirals, volutes, double hooks, tend to occupy separate sites. We are not yet sure whether this is a question of two different time periods (the



Fig. 8. Surface print of swaddled infant figures at Upper Icacos.

“spiral” groups are predominantly in the mountainous interior where the infant type is rarer), or is perhaps a difference in motivation and meaning. “Re-engraving” is evident in both.

Capá Type. Examples of the other separate petroglyphic style, not only in imagery but also in quality and depth of groove, are found at the Icacos, Caonillas, and Salto Arriba sites. Those situated on the northwest wall of the triangularly shaped rock shelter at Icacos (Fig. 9) are finely pecked and smoothed, less than $\frac{1}{16}$ inch deep and from $\frac{1}{4}$ to $\frac{1}{2}$ inch wide. The design is discernible mainly because it is cut through a yellowish stain pervading the rock surface, and which is now starting to re-invade the groove at certain points (Fig. 10). On the opposite wall of the shelter, close to the entrance, is a solitary engraving of a realistically portrayed butterfly or insect, seemingly in the act of flying out of the shelter (Figs. 10, 11). The imagery and cutting technique here is different from the other two petroglyphic sites along Río Icacos which feature mostly the swaddled infant type.

At Caonillas, the correspondingly divergent style is in the form of a “dancing” figure with turban-like headdress, or diadem, swinging ear-pool, hands clasped as if in prayer, and a clumsy attempt at foreshortening (Fig. 12). Although not entirely successful at escaping the

confines of conventional design, the intent is naturalistic, a portrait rather than a zemi. The figure faces downstream (east) and looks up at Cerro Morales (988 m.) towering in the distance. The texture of the groove, although in places eroded almost to the smoothness of the granite surface it is on, still shows the fine and even pecking technique found in similarly executed petroglyphs at the Icacos rock shelter and Salto Arriba (Fig. 6), and again on the pillar stones at the Capá, Utuado, dance plaza site (Figs. 13, 14). Its groove ($\frac{1}{8}$ inch deep) is somewhere between the average $\frac{1}{4}$ to $\frac{3}{8}$ inch depth of the averagely distinct “swaddled infants” nearby, and the less than $\frac{1}{16}$ inch depth of barely legible traces of still the same infant type.

SEQUENCE OF TYPES

Unfortunately, available illustrative material of other West Indian petroglyphs is scant and represents only a few islands: St. Kitts (Fewkes 1903-04: 158, Fig. 24), St. Vincent and Grenada (Huckerby 1914, 1921), Curaçao, Aruba, and Bonaire (Pinart 1890; Hummelinck 1953, 1957), Guadeloupe (Koch-Grünberg 1907: 61; Mallery 1888-89: 140, Fig. 103), and the Bahamas (Mallery 1888-89: 138-9, Figs. 100-2). Krieger (1929, Pl. 5), Boyrie de Moya (1955), and Pinart (1890), have recorded pictographs and petroglyphs in Santo Domingo, and Herrera



Fig. 9. Making a surface print of Capá type petroglyphs at the Icacos rock shelter.

Fritot (1938) the interesting pictographs at Punta del Este, Isla de Pinos, Cuba. In our own study of Puerto Rican petroglyphs we need an equally systematic, island by island, report from the rest of the Antillean area. At present, on the basis of available material, we have no way of knowing how far certain aspects of the infant type (already discernible in some Lesser Antillean petroglyphs) evolved before its final "Puerto Rican" stage. Tentatively, however, on the basis of Rouse's chronology and our own findings at Río Icacos, we believe that the swaddled infant type came into its own in Puerto Rico at least as early as Period III and represents the beginning of a "local" style, with basic design elements comparable to the South American shallow or "Temehri" type as defined by Im Thurn (1883: 391-7). As the latter diffused through the Lesser Antilles, its rather severe angularity underwent gradual modifications and eventually became the rounded and more expressive animistic type popular in Puerto Rico. The appearance of this petroglyphic type inland on the Río Grande de Arecibo and also its tributary, Río Caonillas, and its existence in pictographic (painted) form on the walls of Cueva del Templo, Samana, eastern Santo Domingo, indicates that the final realization of this style took place

during Period III, since it was during that time that the major part of the interior was settled and that a population shift westwards into Santo Domingo occurred (Rouse 1952: 568-71). We would suggest that certain of the upper Río Icacos figures, those to the right in Figure 8, may be the earliest examples of this style because of

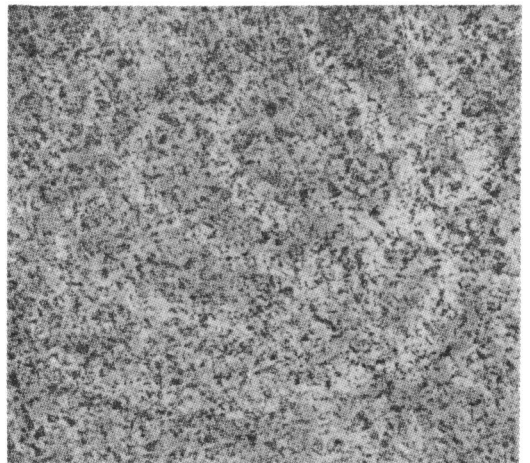


Fig. 10. Photographic detail of a finely pecked butterfly or insect at Icacos rock shelter. Compare the surface print in Figure 11.

their closer resemblance to petroglyphs from Guadalupe (Koch-Grünberg 1907: 61).

The results of our excavation of a dwelling site located on a small plateau southwest of the hydroelectric station at a point where the Icacos joins Río Blanco, agree with the above hypothesis. The area is currently being used for tomato and vegetable farming and therefore much spoiled by continuous plowing. However, sufficient evidence was obtained from a relatively undisturbed 10-inch deep pit, with a heavy rate of sherd accumulation, to be able to classify it as early (unincised) Ostiones throughout, indicating Period III.

Finally, it is probable that the Capá type of petroglyphs with a shallower and, at first glance, seemingly older groove than their neighbors, are the most purely local and the most recent, whose final stage, characterized by the pillar stone carvings at Capá, Utuado, belongs in Rouse's Period IV (Figs. 13, 14). In this category are the two heads facing each other on top of the Salto Arriba boulder (Fig. 6), the dancing figure at Caonillas (Fig. 12), and the Icacos panel with naturalistic "butterfly" (Figs. 9-11).

Diagnostic of the style is the shallower, more evenly controlled groove (no re-engraving), a tendency towards naturalism, almond shaped "negative" eye pits more deeply incised than the rest of the design, special treatment of the nose and lips and eyebrows, similar to the stone masks and sculptured heads of higher Tainan art, and the appearance of the earspool (a ceremonial trait) in the form of a punctured disc. The circle with a dot in the middle becomes a dominant motif in later Tainan pottery decora-

tion, figurines, three pointed stones, and ceremonial duhos. Further indications of this being the latest petroglyphic style in Puerto Rico, is the condition of the groove itself. In reconstructing the dance plaza site at Capá, Mason (1941: 223) overturned a number of pillar stones which had fallen on their faces and been buried. One of these shows an unweathered groove (Mason 1941, Pl. 7, Fig. 2). We also re-erected a fallen pillar stone at Capá in 1957 and found a design whose groove was lighter than the rock, and appears freshly made (Fig. 14). Since we know that weathering is not a very long process, we can deduce that the courts started to fall into disrepair, or were deliberately despoiled, soon

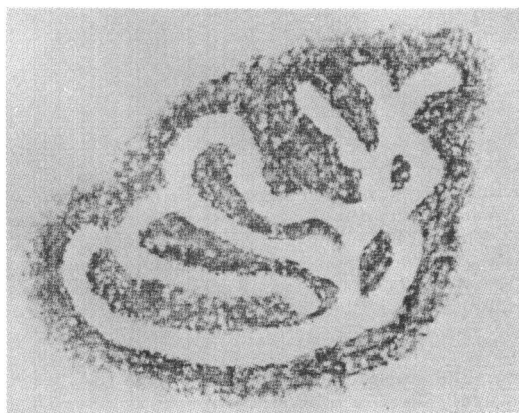


Fig. 11. Surface print of the butterfly or insect at Icacos shown in Figure 10.

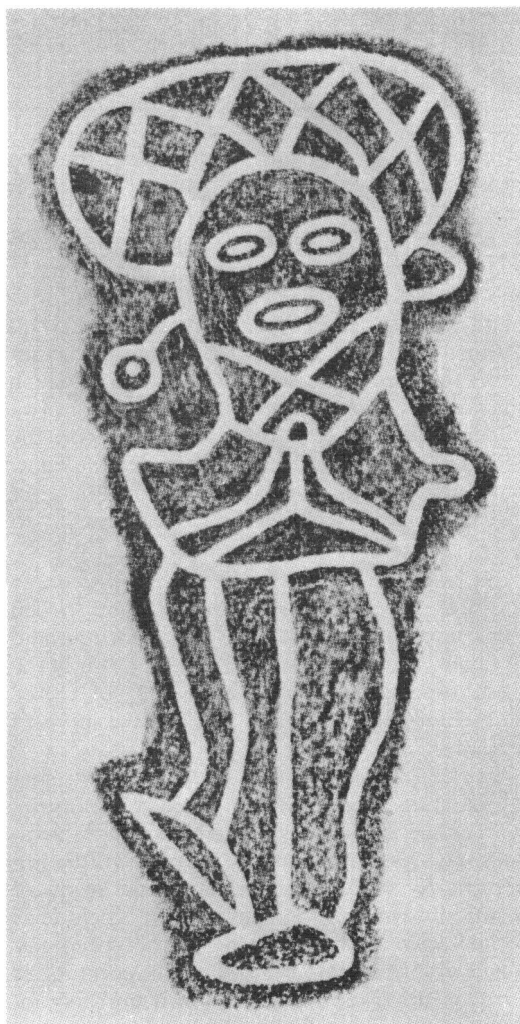


Fig. 12. Surface print of a dancing figure at Caonillas.

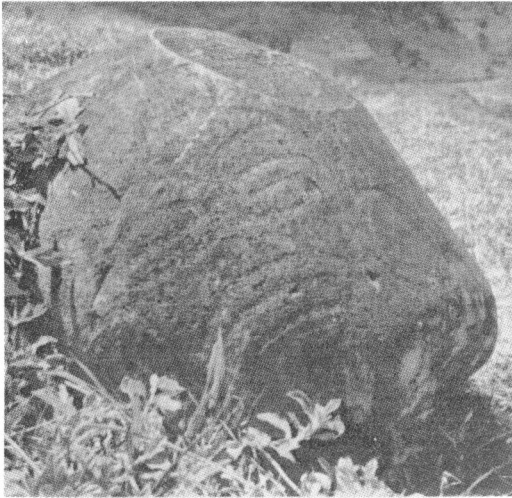


FIG. 13. Petroglyph on pillar at dance plaza site of Capá, Utuado.



FIG. 14. Petroglyph on pillar at dance plaza site, Capá, Utuado, showing fresh and unweathered state of the grooves.

after these carvings were made. Note that the protected groove inside the Icacos rock shelter still has this fresh aspect (Fig. 10).

At Icacos and Caonillas, supporting archaeological evidence for corroborating our theory of the recentness of these petroglyphs is unfortunately meager. We know only from Fewkes (1903-04: 82) of a dance plaza or ball court being reported from Barrio Paso Palma in which the Caonillas sites are located. Apart from two petaloid celts in our possession and reportedly found near the Icacos rock shelter site, we know only of a "very fine stone mask" which De Hostos reports was found in the vicinity.

FUTURE STUDY

This report is necessarily incomplete in lieu of a comprehensive coverage of the entire island of Puerto Rico. We especially need to study the western sector which we have not yet visited and where the Indians are said to have survived longest.

In the future, we plan to treat certain sites which seem to comprise a single stylistic unit, such as the Zamas rock shelter and the Matrullas area, as separate studies. Also it will be important to make a more systematic study of recurrent symbols and eventually include a comparative study with other Caribbean areas. Since we have demonstrated the importance of more accurate recordings, this will probably involve similar careful and detailed investigations in the rest of the Antilles and eventually also

those South American areas directly concerned.

Finally, if we are to stay within Rouse's time period for Puerto Rican petroglyphs, we are faced with the problem of those faint traces of what appear to be earlier engravings at Caonillas, Icacos, and other river sites. Some of these are identifiable as being of the swaddled infant type (Icacos and Caonillas). We find the groove of these eroded symbols appreciably narrower than their more distinct counterparts. Was re-engraving, then, a general practice with occasional emphasis on certain symbols, the latter being perhaps clan totems? In order to answer this question it will be necessary to devote more time and special efforts in revealing these faint engravings in order to establish their nature more clearly, although it is unlikely that we shall ever be able to take completely accurate prints of them.

Acknowledgments. I am deeply indebted to Irving Rouse for his cooperation and generosity at all times during this study including the use of his file of petroglyphic sites in Puerto Rico; to Ricardo Alegría, Instituto de Cultura Puertorriqueña, San Juan, for additional help and information concerning sites; to artist Sari Dienes for information regarding use of the Kendall Mills non-woven fabric, Webril; to Don Bernardo de Paz and family, Alcalde Adrian Torre, Manuel González, and Efraín Reyes González at Jayuya, and to hydroelectric plant director Alberto Riefkohl, Felipe and Damas and their families at Río Icacos, and the hospitable jibaros of Puerto Rico without whose help we could never have managed; and to my husband, Roberto, official photographer and enthusiastic collaborator.

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