THE ATLATL SPUR:
A NEWLY IDENTIFIED ARTIFACT FROM THE LESSER ANTILLES

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PROBLEMATICAL OBJECTS FOUND AT INDIAN CREEK, ANTIGUA

In 1973, during the Indian Creek excavations, two similar problematical artifacts were unearthed from Terminal Saladoid levels. At that time it was conjectured that they represented some phallic symbolism. After the 1977 Congress, Alfredo Figueredo visited Antigua and on inspecting them he remembered he had seen similar artifacts illustrated in some archaeological publication.

![Diagram of shell and green stone artifacts](image)

Fig. 1
PROBLEMATICAL OBJECTS FOUND AT INDIAN CREEK

Shell
Green Stone

Sect.X:1, 25-50 cm lev.
O.P. Starr Dec. 1973

Sect.C:1, 50-75 cm lev.
A.A.S./Yale June 1973

Cms.

ATLATL SPURS FROM CALIFORNIA

Later Figueredo searched his library, and found an article in AMERICAN ANTIQUITY by Riddel & McGeein (1969), illustrating thirty atlatl spurs, (also termed throwing stick and spear-thrower spurs), from California. These were indeed comparable to artifacts found at Indian Creek; one from San Francisco Bay is almost identical in form (see Fig. 2v).
The authors have classified California spurs into two types: 'Snake Head' and 'Acorn.' The Indian Creek specimens are of the latter type. This paper is to alert Lesser Antillean archaeologists to the possibility of finding throwing stick spurs in their collections. As a background, let us consider the functions, distribution, characteristics and uses of the throwing stick in general.

395
 FUNCTIONS OF THE THROWING STICK

The throwing stick undoubtedly commenced during the Paleo-Indian period (Rouse 1963 & Stanford 1979). A wooden feathered shaft or dart tipped with a chipped stone projectile point, was thrown by an implement which has been called a Throwing Stick, a Spear Thrower, or an Atlatl. These were sticks or boards about 60 cm long, upon which was laid the spear, the butt end of which engaged into a projecting peg, hook or spur (See Fig. 3).

The spear-thrower in effect lengthened the hunter's propelling arm by virtually giving him an extra joint. Using a 'snap-the-whip' action, the accuracy and thrust of the throw was improved, thus adding to range and impact. The stick gave the hunter a greater grip on the spear and gave him a longer time to apply the force of his muscles.
The spear was thus more controllable and even travelled better into the wind, an important factor for early gamehunters, who wanted to be down wind of their quarry.

**DISTRIBUTION**

Anthropologists report a worldwide distribution of this weapon. Spearthrowers were used in N.E. Asia, France, North America, Central and Andean America. They have been used up to recent times in Australia, New Guinea, Micronesia, by the Eskimos, by the Mexicans on Lake Patzcuaro and in Brazil. Incidentally, the Aztecs were the highest civilization to have used the spear-thrower.

In the Caribbean, Las Casas, Chanca and Cuneo, as eyewitnesses of Columbus' second voyage (1493), described spear-throwers in Hispaniola. Loven (1935) claims that the Tainos continued the use of the spear-thrower, thereby differing from the Caribs and the tribes of north-east South America who used only the bow.

**DISTANCE OR RANGE OF THROW**

It has been estimated (Keller 1955) that an average throw of a spear or dart using a thrower could be about 100 m., however, accuracy would be gained only over about one quarter of that distance.

Eskimos use small light spears for hunting seals from distances of about 30-50 m. with considerable accuracy and force. In experiments it has been shown that the spear-thrower adds 58-60% to the range of the spear.

**USE**

The ancient Mexicans used their throwing-sticks, which they called ATLATL for warfare. The chronicler Vega maintained it was a most feared device encountered by the Spanish in Peru. Las Casas reports that the spear-thrower was used to settle hunting and fishing rights and marriage disputes. The most important use was for hunting; the spear-thrower was used to launch harpoons at fish and aquatic fowl. For the latter purpose the stick was often used with an underhand stroke which skimmed the missile over the water to confuse a sitting bird on a lake.

In several areas the spear-thrower had its ceremonial uses, and was often very highly decorated. In 1896 Cushing excavated two throwing sticks out of the mud at Key Marco, Florida. One was 'shining with bright colors' and the other was made of the heart of iron wood' and carved with thin decorative edge lines. Its spur was the tail of a
carved rabbit. This undoubtedly represented sympathetic magic, 'the carved animal on the weapon exerting magical influence over its living kin in the hunt.' (Mason 1884). The Mexicans used the atlatl as part of the paraphernalia of some of the principal Aztec dieties. Thus the stick had many uses.

THROWING-STICK FORMS

(a) Proximal end, handles.
To impart the maximum force to the throw, a powerful grip was important: this was achieved in several ways. Here are some handle forms from different regions.

Fig 4 Throwing Stick forms - Proximal ends or Handles.

(b) Distal end, hooks or engaging spurs. Krause (1902) classified the methods employed to engage the spear to the spear-thrower into male, female and mixed.

MALE A small spur or hook projects above the linear plane of the thrower and engages into a depression in the butt of the spear.

FEMALE There was a cavity in the thicker distal end of the thrower, which was grooved to facilitate the engagement.

MIXED This combines the dorsal groove and the spur in one implement.

This latter is the type that appears to have been used by the Haitians, according to Las Casas' description. (See Fig. 5, for types of distal ends.)
(c) WEIGHTS

Some throwing sticks had weights tied onto the body of the stick. Of all the types shown in the above diagrams, only one of them (from Nevada) used an atlatl weight. It is not certain what the real function of the weights was (Hester 1974). Experiments by Peets (1960) conclude that throws with and without weights showed no significant difference. He proposed that the weight was to secure balance on the hand of the thrower/spear combination, especially for use with long spears. Peets also suggests that the 'weights' were no more than charms.

Hester concludes that further experimentation with weights will have to be made to settle the problem. There is a chance that weights may have been used in the Caribbean, but they are not mentioned in the historic sources. The approximate shape of the weights found in Nevada are as follows:

![Diagram of weights](image)

About 10 cms. (After Hester 1974)

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**Fig 5 Throwing Stick forms** Distal ends for Missile Engagement.

<table>
<thead>
<tr>
<th>AUSTRALIA</th>
<th>FLORIDA</th>
<th>MEXICO</th>
<th>NEVADA</th>
<th>COLOMBIA</th>
<th>BRAZIL</th>
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<tbody>
<tr>
<td>Tooth</td>
<td>Bamboo</td>
<td>Integrated</td>
<td>Rabbit</td>
<td>Spur</td>
<td>Spur</td>
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<tr>
<td>Spur</td>
<td>Node</td>
<td>Mixed</td>
<td>Tail</td>
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399
Now that we have considered throwing-sticks worldwide, let us consider them in the Caribbean.

Loven (1935) unequivocally concluded that the Tainan spear-thrower, GARRUCHA, was of Colombian origin, and that at some time it had made its way eastward in northern South America. He suggests that it had been retained as a battle weapon, as the dark wood used in making really strong bows was not readily available in some parts of the Antilles. The weak bows made of Antillean woods could not compete with the efficiency of the spear-thrower as a weapon of war.

There is rather a striking association between the spear-thrower and aquatic activities. Take as examples, its use by the Florida Key dwellers and up to recent time, the Eskimos, and the Mexicans on Lake Patzcuaro, who used the thrower for duck hunting by canoe.

It is interesting to note that Nuttal (1891) related that the Aztecs had only adopted the spear-thrower and acquired proficiency in its use from the time they took up abode in the Valley of Mexico, where they were forced to take up aquatic chase. Until then their chief arm had been the bow and arrow. Their very word 'Atlatl' is derived from Nahuatl, 'atl' meaning water, 'tlaca' meaning to aim or throw. Thus 'Water thrower,' not an unfit name for the harpoon thrower of these new aquatic hunters.

For water borne people, such as our maritime Saladoids, the throwing stick has some special advantages over the bow and arrow. First, the bow is impossible to manipulate in a seated position and would be extremely cumbersome in the confines of a small boat. The spear-thrower takes no room in its firing position and even leaves one hand free to maneuver the boat.

Secondly, the bow was not efficient on water because of the wetness, which produced a deteriorating effect on cordage, sinew and wood--causing loss of elasticity.

Thirdly, the spear-thrower was eminently more suitable than a bow for casting a harpoon with line attached. The bow gives a greater acceleration to a light missile, but the throwing-stick gives greater power to launch a heavier harpoon with line attached.

These then are all reasons why the Maritime Saladoids would have retained the spear-thrower along with the bow. We should certainly look for archaeological remains of these spear-throwers in the Lesser Antilles.
HISTORIC REFERENCES TO ANTILLEAN SPEAR-THROWERS

Breton (1665) has no reference to throwing-sticks, perhaps thus supporting Columbus' statement that the Caribs used only the bow and arrow, whereas the people of Cuba and Haiti only knew the spear-thrower.

Cuneo, speaking of Hispaniola, described spear-throwers, but his was not as lucid as Las Casas' description. Las Casas (1556), vol I, pp 344-345 describes a Haitian throwing-stick. Alfredo Figueredo has translated this passage as:

"...so were they all fighters and warriors and each of them was provided with weapons in his own house, which (weapons) were their bows and arrows and certain sticks in the fashion of darts, which they threw with great industry and ingenuity, and in this manner; they had a throwing-stick which was well made and cunning, four spans long, and at the tip it had a small end piece with a groove, upon which they rested the stick which served as a dart, and the (throwing-stick) had a handle of cotton made into a loop, within which they placed their wrist in order to secure the (throwing-stick) from falling; they placed the stick on the groove or foot of the throwing-stick, and by the handle they gripped the dart with their fingers, and with great skill they threw the dart better than if it had been winded by a great cross-bow, which thing, among naked persons (such as themselves), and even (among) ones that are dressed yet not well armored, is a dangerous weapon and this was the most deadly that on this island and in many parts of these Indies were used.'

From this description it can also be learnt that the Greater Antillean spear-thrower had a cotton handle with a wrist loop for security, and that it was of mixed type with a female groove and a small male end-piece.
Skinner (1925) shows a greenstone object which he calls a spear-thrower hook or spur. This is a completely different variety from the acorn type found in California, and is shown in Fig. 7.

The main difference is its leaflike section, and it would be hafted in a split stick in a vertical position.

Hoffman (1963) reports a problematical object from Mill Reef, Antigua, which could also be of this same vertical type. This artifact is also illustrated in the Third Congress Proceedings, Grenada p. 99.

These objects appear very different from the recently found objects at Indian Creek, but it is quite possible that they were used for the same purpose, as we have seen that there is a great range in the form of throwing-stick spurs.
CONCLUSION

From the similarity of the California spurs to the artifacts found at Indian Creek and from historic references, I conclude that the Maritime Saladoids of the Mill Reef complex (Terminal Saladoid) made use of the throwing-stick.

We have also seen that the throwing-stick has enjoyed popularity over a long range of time and space and that this weapon has been used extensively in association with aquatic activity. Together with Las Casas' description of the spear-thrower in the Greater Antilles, I see no reason to doubt the possibility of its use in the Lesser Antilles, during Saladoid occupation.

We should now all re-examine our archaeological collections for spurs of the acorn and vertical types described. It is hoped that we will be able to describe throwing-stick spurs from our different territories, thus determining some distribution pattern.

Already, on re-examining our Society's collection at the Mill Reef Museum, we have found a further acorn type spur, which happens to have been collected from St. Kitts many years ago.

![Fig 8 & ST KITTS Shell](image)

![Fig 9. Possible spurs from Mayero and Santo Domingo.](image)

On searching through photographs in various archaeological publications, I have found further possible spurs illustrated but not so identified. One is from Mayero, (Sutty, 1977) Fig. 3, p. 205, and three others are in Rodrigo (1972), Figs. 142 & 143, p. 290.

If any further spurs are found, they should be examined carefully with a lens for traces of any black substance, as it is possible they
were fastened onto a stick with a bituminous tar or asphalt as well as with a cord. Also with the lens, traces of use-damage might be noted.

I have replicated spurs in fiberglass and used them in throwing experiments. Use damage appears on the upper anterior surface, which is the area that takes the friction and full thrust of the spear butt, during the middle part of the throw (see inset, Fig. 3). This wear mark appears to be visible in the California spur, Fig. 2(v).

Now having read this paper on spear-thrower spurs, I hope you will all examine your collections and describe them from your own territories. I shall be pleased to hear about them.

NOTE: After this paper was delivered and up to the time of press, the following further spear-thrower spurs have been reported by:

Kurt Fischer from Merser, Haiti.
Dr. Ricardo Allegria from Luquillo, Puerto Rico. (Ostonoid)
Edgar Clerc from Guadeloupe. (Three small ones c. 2.5 cm)
Iraida Vargas from Venezuela (c. 650 B.G.)
Lesley Sutty, the Mayero spur confirmed.

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