The Problem of the Atlatl

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The "atlatl," or "throwing stick," is a simple but ingenious implement by means of which a light lance or spear may be cast with greater velocity and precision than would be possible through the use of the hand and arm alone. It provides, in effect, an extra extension of the arm and an additional lever or toggle-joint by means of which combination the propulsive force applied to the spearshaft is greatly increased. It should be considered as a weapon, being in fact a sort of counterpart of the bow.

Objection may be properly raised against the use of the word "atlatl" to apply in general to this weapon in use since remote times in some quarters of the six continents and the islands of the several seas. In Australia it is called a "wommera," and in each region where it is used it bears a different name.

To call it a "throwing stick" is likewise objectionable since the "boomerang," a "stick" which is itself thrown, is also defined as a "throwing stick." Krause, a reliable authority upon the spear thrower, raises these objections but ends by calling the weapon in all of its forms a "spear sling"—which suggests, to us at least, a use of thongs or cord, as in the ancient Greek "amentata." The French archeologists, who call it, quaintly, a "propulseur," perhaps come more closely to hitting the mark and providing a really appropriate name for the implement.

What we have here to say comprises, we admit, no more than a brief and insufficient digest of the prolific literature upon the spear thrower as it has been and is now still used in various parts of the world. The two or three years devoted to its study have convinced us that we have, at best, merely scratched the surface of an intriguing field for research. Experiments in its actual use have created an unbounded respect for the versatility of this primitive implement and have provided a decidedly better understanding of its perquisites and possibilities.

The problems of the "atlatl," which are many and varied, may start perhaps with that of the ultimate discovery of its common original source. Its religious, totemic, and ceremonial significances provide another bypath, for primitive man in the most diverse times and places has consistently carved, painted, and adorned it with the symbols of his religious belief or has affixed to it the numerous "charms," "totems," and similar devices, which are presumed to insure success in the chase or in war. Upon Paleolithic examples from France certain incised "tally marks" are presumed to have indicated the number of victims of the spear thrower. In Australia, Eskimoland, and elsewhere a very natural phallic significance is often observable in its form and decoration. Mexican "atlatls," which have come from Mixtec, are so elaborately

carved, painted, inlaid, and gilded as to imply that they were not intended for actual or practical use.

After all, however, our own somewhat extensive research suggests that in basic construction and design there is no considerable difference in the spear thrower wherever it is found. The Australian implement is very like that of Boreal peoples, and specimens from Greenland are sometimes so similar to those of Tierra del Fuego, even to their thonged handles, that it would be difficult to tell them apart.

Since the discovery (1915-1916) by Moore of the unusual culture complex manifested at his Indian Knoll site on Green River, Kentucky, the problem of the "atlatl" has been brought into our own archeological field. Since then Fowke has investigated a similar site at the mouth of Town Creek in northwest Alabama; we have ourselves found a considerable occupation of the same group about the Falls of the Ohio. Webb has explored sites of similar character in the vicinity of Town Creek on the Tennessee River, and Webb and Haag have revisited the region of Green River, partially explored by Moore earlier. We have recited the various extensions to the Indian Knoll occupation in the chronologic order of their observance, which is after all unimportant.

Quite recently, Webb has concluded that certain hook-like objects of antler, customarily associated with rectangular or "reel shaped" so-called "bannerstones" of stone or bone in burials of this culture pattern, comprised, respectively, the distal ends of "atlatls" and weights attached to their shafts. Not only does he so conclude, but he appears likewise convinced that this discovery provides "a new common trait between this Indian Knoll culture pattern and that of Basket Maker II of the Southwest."

One of our own major problems has been, as has been true with others who have studied this manifestation, a determination of the use or purpose of these artifacts, an objective which is, in our opinion, still unaccomplished.

In an investigation of Basket Maker II sites in northeastern Arizona, Guernsey and Kidder recovered a number of "atlatls" of ancient Mexican type, also distributed through Central and South America and even in Florida. A feature of this "atlatl" form, as they reported, was the customary attachment of polished stone or chipped flint, fossils, seeds, or nuts to its shaft by ligature or wrapping of objects. The smallest of these objects reported was 1 inch in length; the largest, 2⅜ inches, weighing 2 ounces. In describing these objects, Guernsey states that, since no practical use could be imagined for them, he could think of them only as charms. The authority Krause classes similar objects attached to "atlatls" as "luck stones." In general, these objects of stone, bone, or flint are flattened upon the surface of attachment and range from ⅛ to ¾ inches in thickness. It is apparently largely upon the basis of the inclusion of objects of this character with the Mexican "atlatl" that Webb has drawn his conclusions and reconstructed a number of problematic implements incorporating the hook and bannerstone characteristic of the Indian Knoll culture pattern. In his report upon the Chiggerville (Kentucky) site he states that "these stones [of the Arizona sites] were securely attached to the throwing stick and

are designated 'weights' in the belief that they served to give balance to the instrument, and to increase its power in projecting the shaft when thrown." Referring to Guernsey's report, wherein two tabular "atlatl stones" or 2 and 2⅛ inches length, respectively, are illustrated, Webb includes as "atlatl" weights a much larger and heavier artifact found typically at Chiggerville and our own Ohio Falls sites. These artifacts, as they appear at Ohio Falls, are often 6 inches in length, and those figured by Webb are apparently of like size.

It is our own opinion, based upon evidence which we believe is substantial, that the movement of Indian Knoll peoples was southwestward and that the several occupational "stations" of the group extending from the Falls of the Ohio to northwest Alabama mark a progressive cultural decline. This is doubtless at variance with Webb's belief, as we interpret it, that the "atlatl" was introduced to Indian Knoll peoples by way of the region of Basket Maker II. Certain it is, in any case, that the Ohio Falls sites, embracing numerous related villages long occupied and densely populated, represent the most impressive concentration of this group so far observed. In addition, it is appropriate to point out that within this area the typical artifacts are superior in design and workmanship to those found elsewhere.

It was possible, at Ohio Falls, to account quite definitely for a successive occupation of the identical sites by a group of southern origin and a still later occupation by a second southern group considerably more advanced in culture. What happened to the original occupants of the site is, we suspect, involved with the appearance and removal of one or the other of these southern sojourners.

Although Moore makes no mention of it, it seems to us obvious that his Indian Knoll site includes, also, a secondary occupation. That this is patently true of Fowke's Town Creek site and those of Webb in the same region we feel certain.

In Moore's report upon Indian Knoll he submits the theory, upon which he was apparently not quite convinced, that the typical bone hook and accompanying bannerstones served respectively as crochet hooks and gauges or "spacers" used in conjunction in the fabrication of nets. Willoughby, whom Moore consulted, did not believe they were so used; nor did he believe that the hooks might have been the distal ends of "throwing sticks." Moore agrees with the latter conclusion and submits the following reasons for this assumption:

1. That the throwing stick or positive evidence of its use has not been found anywhere in the region in which is "The Indian Knoll."

2. That nearly all throwing sticks are of one piece, a construction that insures the required strength.

3. That small points of antler or of flint, which might have served as tips of the shafts used with "atlatls," were not found associated with his discoveries.

4. That some of his hooked implements were too crooked to have been used on throwing sticks and that the cavities in some were too inconsiderable to have served for the insertion of the main part of the "atlatl."

5. That the assumption that the hooked implements were parts

of "atlatls" offers no explanation in regard to the large objects of stone and antler found with the hooked implements and indubitably connected with them.

Concerning Moore's argument in general as it might apply to the Ohio Falls region with which we are most familiar, we have nothing controversial to offer except that at his own Indian Knoll site and at those of Fowke and Webb upon Tennessee River, crude hooked implements appear which might have served very practically as adjuncts of the spear thrower. In the region of Ohio Falls the hooks are consistently of a single pattern with delicately barbed ends which appear too fragile to have served as "atlatl" hooks and with their angular projections unfractured. It is true that leaf-shaped lanceheads of flint, these often 5 inches long, appear so abundantly as to suggest that the lance was used almost exclusively. So heavy were these points, however, that they must have been lashed directly to a shaft too heavy to have been propelled by the spear thrower. The bannerstones in this region are predominantly of polished stone, differing from those of Indian Knoll only, perhaps, in that many have concave ends and a few bear transverse ridges about their extremities. Those of bone are in this region most infrequent. There are here no round grave burials, there is no copper, there are no pipes, and it is probable that the few bits of pottery recovered pertain to a secondary occupation. Artifacts, including those of both stone and bone, are consistently carefully fabricated.

At Indian Knoll, on the other hand, copper appears. Round graves are typical, stone work (except in the case of bannerstones) is inferior, pipes are probably absent, and there is perhaps little pottery. Wyandotte hornstone, absent at Ohio Falls, probably supplies the bulk of material used in projectiles. The typical Ohio Falls lancehead is present but is in the way of being supplanted by notched or stemmed arrowpoints. As we have suggested, there is here a considerable diversity in the form and length of the bone hooks, many appearing too clumsy to serve as a competent implement for delicate textile work.

In connection with Indian Knoll, it is appropriate to introduce at this point a principal argument, or so we believe it to be, against the "atlatl" theory. This takes in the findings of Neumann upon an examination of the available skeletal material from Indian Knoll with which the typical bone hook and bannerstones were found associated. Out of a total of 31 burials reported by Moore with such association, the skeletal remains of only 17 were available for study. Of these Neumann found that: 4 represented adult males; 3 represented adult females; 4 represented adolescents; 6 represented children.

Of the remaining skeletons, one was reported by Moore as a child, leaving 13 adult subjects unaccounted for, some of which were doubtless females. The point to be considered is, of course, that it would be a reversal of aboriginal custom to include the weapons of a man, such as the "atlatl," so generally with burials of female and juvenile subjects. A similar situation prevailed at Ohio Falls, in that three bannerstones were found within the pelvic basin of a female subject, and these objects were likewise included with other female burials. At these sites, however, burials of children were confined to a separate quarter,

and neither of the objects in question was found in association with such burials.

As reported by Webb, Site Lu°86, many of the traits typical of Indian Knoll were found to persist in his northwest Alabama site, this quite near the Town Creek site of Fowke. He observes that there were here low, fully extended burials, 13 flexed burials, and 6 bundle burials. The typical lance point still appears; one "spear thrower of bone," only, is mentioned, but it is assumed that others made of wood had disappeared through decay. There were, however, no bannerstones, either of stone or bone, such as appear so abundantly at Indian Knoll and Ohio Falls. The suggestion that pointed bone fragments cut from the cannon bone of the deer, here quite numerous, served as projectile points, he believes is strengthened by finding many of them fractured and battered at the heavy end as if by impact. These objects, which appear both at Indian Knoll and Ohio Falls, are, we believe, typical of the Indian Knoll culture pattern, as well as are numerous other artifacts he describes from this site.

Of Fowke's Town Creek site, it may be said that the same pattern may be recognized, even if but feebly expressed. There are here numerous flint implements, mostly spearheads and knives, three short and eccentrically shaped bone hooks, bone awls similar to those found at the northern sites, and the projectile point of deer metapodial described by Webb. Here, however, as at Webb's nearby site, there are no bannerstones. At both of the Alabama sites the picture is one of a material culture at its lowest ebb. Fowke, in his customary fashion, asserts stoutly that there were numerous evidences of cannibalism manifest at the Alabama site he describes, and the proof he supplies seems to us sufficiently convincing.

In a paper whose reading is confined to ten minutes it is, of course, impossible to do more than faintly suggest the importance of pursuing the "atlatl" theory to its ultimate lair before the desirable, essential conclusions are submitted. For ourselves, we are yet in the situation of indecision. It does appear to us, however, that there are legitimate reasons for assuming that the assumption that the Indian Knoll hook and bannerstone are to be considered perforce as inseparable in function and purpose is erroneous. In detail we have examined, time and time again, authentic collections in museums here and there in which the veritable Indian Knoll bannerstone is recorded as from Massachusetts, New Jersey, Pennsylvania, Virginia, West Virginia, Ohio, Kentucky, Indiana, Missouri, Tennessee, Georgia, North Carolina, South Carolina, Florida, Oklahoma, and even from Michigan, Wisconsin, and Ontario. We have pursued it, at all events, as near the Mexican frontier as Oklahoma, but, unfortunately, it has led us also into Canada. Meanwhile, we have been unable to follow the antler hook beyond its restricted habitat within the boundaries of the region assigned to the pattern of Indian Knoll.