

The

# ATLATL

“Too long have I hunted mammoth alone!”

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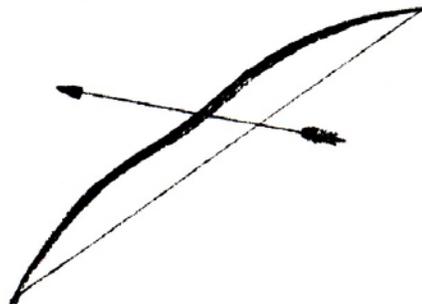
## Atlatl to Bow

By Richard B. Lyons



he hunted were shrinking in size and increasing in speed. The mammoth and giant bison were gone. He must now garner his living from deer, caribou, and the bison. Just as the fauna had evolved, so too did Primitive man constantly modified his hunting demands of a changing environment. The lighter call darts, proved more efficient for the smaller, discovered that lighter darts could be thrown atlatl that flexed. The energy that was released in a higher velocity dart, which were better suited harnessing of energy from a flexible atlatl shaft the same principle in both atlatl and bow. They are both using the flex and rebound effect (a simple mechanical spring) to propel a flexible dart or arrow that has fletching. The bow uses two springs, one from each limb of the bow. The atlatl has one. If one were to take a bow and cut it in half, the result would be two flexible atlatl shafts. This shows that the technology involved in giving a projectile momentum is much the same in both the bow and the atlatl. Even the projectiles of the atlatl and bow have many of the same features in common. Many darts are fletched, as are arrows. Both have the capacity to flex and store energy. The transfer of energy to the projectile initiates at the same

As the end of the Pleistocene came about, the glaciers shrank and the mammoth and giant bison died or were killed off. Man was faced with a changing environment. His tool assemblage changed, as different functional tools were needed. The mammals



much smaller present day the atlatl and spear. equipment to meet the spears, which we now faster fauna. It was soon more efficiently with an form this flexing resulted t the swifter fauna. The to propel a dart is much

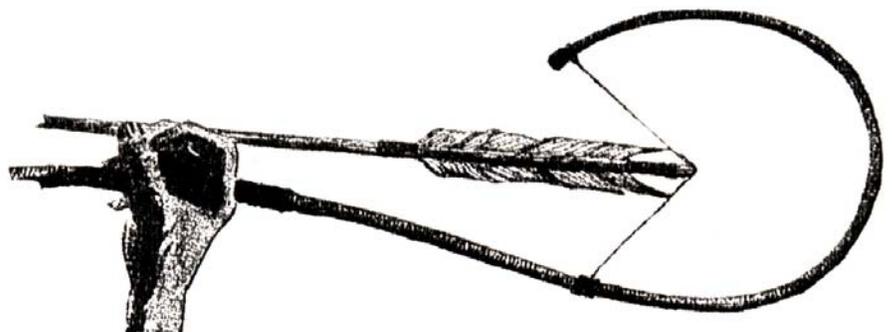


Figure 1

point, the posterior, or knock point of the dart or arrow. The technology used to accomplish the harnessing of this energy is only slightly different. The question arises as to whether there were any intermediate stages of development between the atlatl and bow. I do not know of any archaeological data that supports an intermediate stage. However if there were an intermediate stage, I would expect it to be short lived, and therefore archaeological evidence limited. There is however, an interesting illustration of a possible intermediate stage.

Katharine E. Dopp Ph.D., while working at the University of Chicago, in 1912, published a book for the education of young people. In this book she gives a fictionalized account of a primitive people who lived on the sea coast of Denmark titled "The Early Sea People". The book is based on archaeological data collected from shell middens on the Denmark coast and ethnographic data from people still living there today. She has 219 illustrations in her book of tools of early man and how they lived. One illustration is particular was very interesting. (Figure 1) It shows a tool that combines the basic principles of the bow and atlatl used together. This may have been the intermediate stage between the atlatl and the bow. Unfortunately she does not tell us the source that gave us this illustration. It could have come from archaeological evidence, ethnographic research or been purely conjectural. We don't know.

The evolution from the atlatl to the bow came much earlier in most of the world than it did in the Americas. The archaeological evidence for the bow does not occur until about 1200 years ago in the Americas. Does this suggest a separate migration to the Americas at this time? Did the new emigrants bring this technology with them, or was it a separate, natural evolution in this hemisphere that gave us the bow and arrow? These are questions that still need to be answered.

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