SOME COMMENTS ON THE 1969 NSF FLINTWORKING SESSION HELD AT SHOSHONE FALLS, IDAHO

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In July 1969, through a National Science Foundation grant to Idaho State University, I received financial support to attend a flintworking session conducted by Mr. Don Crabtree at Shoshone Falls, Idaho. Reflecting on this experience in an attempt to constructively discuss my reactions to this session, I find that three categories emerge which deserve comment. These include the (1) benefits of the course to me personally; (2) need for all archaeologists interested in technology and typology to be exposed to this type of knowledge; (3) contribution to archaeology if such sessions could be continued.

Individual Benefits

All who attended this session had special problems and special interests pertaining to diverse geographic areas. The region with which I am concerned is the Southeast, particularly north-central Florida.

Nearly all of the stone artifacts from Florida were manufactured by the aboriginals from silicified limestone. This material is quite heterogeneous yet many fine tools were produced. I became interested in Mr. Crabtree's experiments with heat treatments of silica minerals since it appeared that the Florida cherts had been heat treated prior to final retouch. I had begun some heat treatments of my own to ascertain the workability of the altered stone. My main problem was, of course, that I was so unsophisticated in the art of flintknapping, especially pressure flaking, that it was difficult to determine if the experiments were a success. In the field we heat treated several varieties of rocks, discussed their properties, observed how each responded differently, and noted that the temperature tolerance varied radically depending on the material treated. I had taken several nodules of Florida chert with me to Shoshone Falls including some I had already treated. Mr. Crabtree demonstrated, by pressure flaking both heated and unheated samples, that the altered material was superior. I hope to continue these experiments in order to ascertain what changes actually take place when stone is subjected to high temperatures.

Another problem confronting archaeologists in Florida, as elsewhere, is the interpretation of technology and typology through an analysis of the artifact inventory in order to determine influences both temporally and

spacially. It became apparent to me that without a knowledge of how these tools were actually produced we, as archaeologists, could do little more than make superficial suggestions as to their intended function, subsequent use, or their resemblance to artifacts from other locations or time periods, since similarity of form does not necessarily prove similarity of manufacture, etc.

As a result of this opportunity to work with Mr. Crabtree many of my difficulties have been resolved and should be overcome with practice. In addition, many factors which had not seemed important to me or which had not occurred to me were discussed. This, in my opinion, was a major contribution of the school. If we don't even know enough about technology to ask the questions, we certainly can't solve the problems.

Value to Archaeologists

Idealistically, archaeologists aim at interpreting their data so precisely that they may ultimately make positive statements concerning the way of life of people who have left only the material aspects of their culture behind. Why, then, have so many archaeologists waited so long to attempt to reproduce the artifacts they recover when often these objects are all they have and may be the key they need to open the door to the past or the next door neighbor's house?

The need for archaeologists to recognize processes of manufacture has been discussed briefly above. Another factor to be considered might be: Are the regional differences which seem to occur in the artifact inventory a result of independent development or do they exist because the raw materials do not respond in the same way? To answer this question, one must be aware of (1) and able to recognize flake scars i.e., thinning, percussion, pressure, intentional vs. unintentional, etc.; (2) the properties of stone in various geographic areas; (3) the type of percussor which was probably used depending on the material percussed; (4) the amount and direction of force applied; (5) the fact that there is a relationship between force and velocity, the percussor used, and the material struck; (6) wear patterns. As mentioned earlier, one may encounter similarity of form but not necessarily similarity of manufacture. But we may be missing historic relationships because we have not answered the above questions. Perhaps the differences we see exist only because of the physical properties inherent in the stone itself.

Archaeologists need to be exposed to flintworking techniques. If we don't know what will happen to a stone when we hit it depending on our skill and what we hit it with, we better start finding out.

Continuation of the Sessions

It is extremely difficult to describe on a printed page the step-by-step procedure involved in manufacturing an artifact. It is even more difficult for the reader of such an article to visualize what is taking place especially if his knowledge of terminology and lack of skill are contributing factors. Illustrations, at best, are often confusing. In addition, how many busy people can spend the time away from other duties to experiment on their own with a process that is alien to them? It is no wonder that there has been a paucity of talent emerging in this area.

The flintworking session at Shoshone Falls, Idaho, in July 1969 afforded an opportunity to resolve these problems. Not only did we have professional guidance to shorten the learning period, but we were able to devote full time perfecting techniques and "getting the feel" of working with stone. We worked from 6 to 10 hours per day including two weekends. Probably at no other time in our careers will we be able to spare so much time, but this initial exposure was imperative.

I have not discussed the actual physical and mental exhilaration involved as one passes from a clumsy beginning with poor control and results to a semi-selfconfident termination with fair control and results after only four weeks. One could say much about sore muscles, cut hands, and frustration, but future participants will experience this for themselves if the sessions continue. Many other benefits were derived far too numerous to recount here. All of us at Shoshone Falls were able to not only resolve some of our own problems, but to learn of puzzling aspects faced by archaeologists in widespread areas.

Profiting from Mr. Crabtree's more than 40 years of experiments and observations concerning properties of nearly all varieties of stone occurring in the world has been an experience and an opportunity which has no parallel.