

March 9, 1969

Route 1, Box 39

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Mr. Jerome Jacobson
900 Riverside Drive
New York, N.Y. 10032

Dear Jerome:

Just received your most interesting and complimentary letter of Feb. 7th which provided a much needed incentive to continue writing about lithic technology. Writing, for me, is sheer agony and there is so much yet to be covered. I am currently preparing a paper on the behavior of cones in relation to the principles of stone flaking - intentional as opposed to natural fracture.

I am enclosing a copy of Tebiwa which includes an article on the "edge ground cobble" technique of blademaking which you might find of interest. This is an extraordinary technique which I discovered quite by accident and which needs more experiment. But it does detach long, straight blades with little or no platform. I wrote to Jacques Tixier and Francois Bordes about this technique and Tixier has been experimenting with great results. He writes "I know some edge ground cobbles from Epipalaeolithic and Neolithic cultures in Africa. They were, as you told me, supposed to be grinding stones." Tixier will be here the 9th of May for ten days and we will experiment with this and other methods of blademaking. Bordes will be here the first part of May and we shall also experiment. We have written a joint article on the Corbiac blades which should be published soon in Tebiwa - if they ever get the lead out. I will have Dr. Swanson of Idaho State University send you and Dr. V.N. Misra some articles on lithic technology. The paper on the thermal treatment of silica materials is now out of print but I hope to rewrite it soon. Will put your name on the mailing list to receive a copy.

The American Museum has tentative plans to bring me to New York next Spring to prepare an exhibit of stone working spanning the last two million years - a frightening challenge. While there, I would look forward to a visit with you and the opportunity to see some of the actual India material.

Now about the crests on the dorsal side of the blades. The blade - a specialized flake with parallel or sub-parallel sides - can be made by pressure, percussion, indirect percussion or a combination of pressure and percussion. To some extent, the manufacturing technique used can be ascertained by the style of platform and the character of the ventral side of the blade - but this would involve too much writing at this time to explain in a letter. The material and form of the core is of prime importance when detaching blades. If it is available and suitable, natural blocky rectangular material can be used with a minimum of preparation. An elongated cube permits the worker to remove a blade parallel to the long axis of the core from each of the four corners. These blades will be single crested and triangulate in transverse section and one half of the dorsal side of the blade will retain the original exterior surface of the core. Each blade scar will, in turn, create two crests on the core which act as a guide for subsequent blades. In order to obtain the ideal cross section which is trapezoidal in transverse section, the force must be

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applied between the two crests (ridges) which prevent the blade from spreading. The spreading would cause a shell-like fracture and, therefore, detach a flake without parallel sides. So you can see that the condition of the core must be ideal in order to remove a series of uniform blades. Human error or non-homogeneous material will produce malformed blades. There are so many ways to prepare cores for blademaking that it is impossible to go into all of them at this time. I hope to cover many of them in future writings. However, these above mentioned methods are good diagnostic traits and can be traced in time and space.

Your mention of bead making is of particular interest to me for there is little doubt that it is a carry-over from the original blademaking techniques. By all means, this valuable information should be written in detail before the technique is discontinued and lost. It would be a valuable contribution to a more complete understanding of the lithic industries. If you or your friends have the opportunity to photograph and record this information, I would like to urge you to do so. I would also suggest experimenting with the methods and then recording personal reactions to the process and details about the muscular motor habits involved. I have briefly tried this method with no great amount of success but then I have never seen the actual process. I shall continue to experiment and any information you have would be greatly appreciated. Several years ago in the Lapidary Journal I read a brief article about bead making in India and there was mention of this technique as well as the thermal treatment of the gemstone before it was flaked. As I remember, the rough stone was mixed with sawdust and placed in large earthenware jars and fired. This caused the texture of the stone to become more glasslike and the oxidation intensified the colors. I am sure that you will discover that the chalcedony worked aboriginally has also been heat treated. I am researching to discover just when the method of altering stone prior to flaking first appeared in the history of man.

If you would like to send some samples of cores while Tixier is here in April, we would both have a chance to see them. Jacques Tixier, who specializes in North Africa materials, is probably the greatest authority on microlithic industries. I would strongly recommend that you get his book "Typologie De L'Epipaleolithique Du Magreb" National Museum, Paris XIII, France.

I will be at Idaho State University on Monday and shall have Dr. Swanson send for the literature you recommend by Subbarao and Sankalia.

Congratulations on your interest and keep me advised of your progress.

Best regards,

Don E. Crabtree