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Nov. 17, 1971

Mr. Joel I. Klein  
New York University  
Dept. of Anthropology  
401 Rufus D. Smith Hall  
Washington Square  
New York, N.Y. 10003

Dear Mr. Klein:

Thank you for your letter of Nov. 8th and it is nice to hear of your interest in thermal treatment of siliceous materials. You can obtain a copy of my article on this subject by purchasing the set of reprints suggested by Dr. Swanson.

Other than that I can suggest the following: One of my students, Barbara Purdy, recently published the results of some of her experiments on heat treatment in Science, July 23, 1971, Vol. 173, PP 322-325. Professor Francois Bordes and Dr. Jacques Tixier have also kept data on some unpublished experiments on Old World materials. Dr. Tixier is with the Museum National D'Histoire Naturelle, Institut de Paleontologie Humaine, 1 Rue Rene Panhard, Paris, XIII, France and Professor Bordes is with the University of Bordeaux, Faculte des Sciences, Laboratoire de Geologie, 33 - Talence, France. If you write to these men they may give you some data.

There is still much to be done in this field. I have found that materials such as obsidian, basalt, quartz crystal and others are changed by heating. Recently I tested some Arkansas novaculite and found that it requires several hundred degree F. more than quartzites which need a high temperature. Some miners require a longer time than others before they change. The color changes are also significant - yellows changing to reds are common while the novaculite changed from white to a dark blue-gray color. But the important result is the improvement in the working quality of the stone after alteration. Often there is little color or texture change but the alteration allows the worker greater control of flake detachment.

Please keep in touch regarding your results and sorry I can not give you more names to contact, but there has been little research done in this field.

Sincerely yours,

Don E. Crabtree

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