425 E. 79 St. New York, N.Y. 10021 February 7 1975

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Mr. Don E. Crabtree Route 1, Box 210 Kimberly, Idaho 83341

Dear Don:

I apologize for not having written to you sooner. It was a great pleasure to meet you and Evelyn again at Calgary. I learned so much at the conference. I realize, of course, that I must thank you for having been invited there.

I think I mentioned at Calgary that I gave up my engineering position to spend more time on archeology and lithics. So the past term I finally(!) finished my M.A. paper - mostly a review of some mechanics principles related to flintworking that have appeared in archeological literature. My Calgary paper had some excerpts from it. Meanwhile, I have also been taking courses beyond master's at NYU. I only heard last week that I have been formally admitted to their Ph.D. program.

Last year I thought it would be useful to talk to an engineering audience about some of the many problems related to the mechanics of flintworking, and to indicate to engineers what kind of cooperation would be useful for improving our understanding of such problems. So, in October I gave a talk to the N.Y. Academy of Sciences on such a topic. Some engineers seemed to be rather interested in it... I still have plans, perhaps within the next 5 years, to present some of the complicated problems at a specialty conference on fracture. Perhaps I can get one or two fracture experts interested in cooperation.

If I may, I would now like to ask a question from you that will take some time for me to explain. I believe the question is an important one for interpreting your writings. I hope the answer to it can clarify what seems to be an ambiguity (and perhaps consequently also a contradiction) in some of your writings. I think it is important because it relates to an observation that I suspect only very few expert flintworkers are capable of making.

This question relates to your ambiguous use of "bending" and curved surfaces.

In your 1967 publication (p. 24), you speak of "flexibility: this is a term meaning the quality to be bent, or pliancy or not being stiff or brittle. It is this quality that allows a person to control and guide a flake over a curved surface. If it were not for this property of flexibility, here would be no convex or double-convex artifacts. Different merials have different degrees of flexibility. ... A flintknapper can control the flexing to an amazing degree." Elsewhere, you refer to "bending flakes" as those having "pronounced curves on the plane of fracture" (1972, p.38), and to "curved flaking" as "bending