

Jan. 1, 1967

Dear Jacques:

Thank you so very much for your nice letter and also for the package of extremely interesting material. I certainly do appreciate all the kind things you said about my humble efforts at writing the Folsom article - they give me much encouragement which I need very badly. Have finished the paper on the Meso-American Polyhedral core and this should be in print soon and will send you a copy.

It is a delight to hear of your experiments in various techniques of flintknapping and, indeed, you are making excellent and rapid progress. I just don't know how you have time to do so many things - writing, travel, your work in Paris, and your experiments. Thank you so much for the paper on the ostrich eggs and the Capsienne industries in Tunisie. I thoroughly enjoyed reading it and it makes a fine addition to my small but growing library.

Glad your tests were so successful on the Bruneau jasper. My attempts at alteration have resulted in failure and now that you have been successful in getting the change, I can see that it takes higher temperatures than I was using. The answer seems to be in applying the higher heat over a longer period of time. I don't have any of the aboriginal artifacts of this material on hand right now, but have seen several pieces that have been made of this material and they were very lustrous - apparently altered. Thanks for your analysis of the microburin and for your replica. You are right and I can see I have much to learn about burins.

Jacques, I am really amazed and pleased with your pressure work for you have not only mastered one technique, but many. It has taken me years to do what you have accomplished in such a short time. You are very skillful. I would like to have your opinion on what takes place when using the rubber pad and why the flakes terminate so differently than when it is just supported in the palm of the hand.\* Also your thoughts on the inverse technique - why thinner and longer flakes can be removed without undulating or rippling. I am sending you a point with this inverse technique which was done by a student of mine by the name of Gene Titmus. I have been training him for the past eight years, for I do not want this flintworking experiments to stop if and when I can do it no longer, or am gone.

The Capsienne blade technique presents several problems which I don't fully understand. The size, thickness and length of the blades has limitations from pressure alone. The texture of the material also limits the dimensions. The top of the core must be specially prepared to prevent the tool slipping; or the angle of the core top must be changed to less than a right angle. When the overhang left from the previous blades is removed, the blade can be removed more easily. A small flake can be removed from the top of the core near the edge to serve as a platform for seating the tip of the pressure tool to avoid slippage; or the top of the core can be ground. The proximal ends of the blades hold the secret. If you have one or two broken Capsienne blades that you could send to me for inspection I may be able to get some clue, or clues, which might indicate one or more techniques of removal. Just the ends that received the force. I am sending you several blades I made by using the pressure crutch on the untreated flint material which you sent to me. You can compare the size and character of these flakes with the Capsienne and give me your comments. These represent the ultimate in length of blade I can remove from an untreated core when using pressure alone. (Unless I get heavier and, therefore, could give more weight to the crutch). If the material is less granular and more vitreous, then I can remove longer blades. I will send you the core from which these blades were removed when I send you the obsidian. I need your help to experiment with the use of pressure in combination with percussion. If one person pressed both downward and outward while the other person struck a projection

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on the shaft of the crutch, I'm sure we could remove large well-formed blades with ease. Perhaps Francois and I can try this together when he comes to the U.S. I have been getting some fair results by the use of indirect percussion, but the core is not like the Capsienne with a right angle top, but is rectangular in shape. Perhaps this is because when I try to do this on a core with a right angle top, the indirect punch slips when it is struck and I fail to get the Uniformity I desire. Also, it causes waves not found on the Capsienne blades. You mentioned the use of ivory as a pressure tool. It works fine but the tooth of a hippo is even better. Bordes gave me a piece of Hippo tooth and it is very satisfactory. I prize it very much as it doesn't crush the material as does metal.

I like your blades very much. You had more success than I for I broke more than I removed successfully. Also, I think yours are flatter. One comment - if you will remove the overhang, it will provide a better alignment, the platform will be smaller and the blade will detach easier. I find that flint will terminate better than obsidian. The flint also feels dry. I know that is not the proper work - perhaps I should say obsidian is more elastic than flint, which has a stiffer feel. I find that if the flint core is placed on an anvil in such a manner that the forces do not oppose one another, then the blades can be removed with greater ease. They will be flatter and will terminate without removing the distal end of the core.

I will send you a core preform of some obsidian from Iceland which I received from Dr. Junius Bird of American Museum in New York. Do not be discouraged if you have failure with this material as it is very brittle and much different than other obsidians. I am sending it to you for your opinion on the differences in materials which look alike but do not work alike. Also will send you some Oregon obsidian slabs and blocks and some preforms. I most certainly do not want you to stop experimenting now, so let me know when you need material. Also am sending you a glass knife, which I think you will enjoy retouching. You and Juliette try cutting with it as is and then you retouch the edge and see the difference. It makes a fine cutting tool.

I wish I could write my letters in French as well as you do in English. You do so well, and your English is much better than mine. I will continue the experiments on the Capsienne cores and blades and advise you of the results. Thanks again for everything.

Sincerely,

Don Crabtree

\*Perhaps I had not mentioned this technique to you, but I did to Francois. In case I have not told you about it before, I will now and you can experiment with it and give me your comments. Place in the palm of the left hand a piece of thick rubber (three quarters of an inch by three inches long and two and a half inches wide) and with a groove cut in the middle at a slight slant. Then place the back of the hand against the inside of the left thigh. The groove is for the flakes to travel on the underside of the biface. This type of support makes the flint feel dry. For some reason the flakes will feather out without either step or hinge fractures. One can then make a diamond shaped cross section such as the handles of the Danish knives or daggers. I find the flakes snap off differently than when using a simple pad in the left hand. You can use a solid rubber heel of a shoe for the piece of rubber. It seems to give better control of the flake termination. I don't know exactly why, but it give the artifact a different character.

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