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Dear Dick:

Please excuse the tardy reply to your letter of May 9th but I have been away from home and then busy getting things ready for the summer field school.

I, too, am upset by the derogatory review by Kaminga and Hayden of your excellent paper. Thought Hayden would have learned to omit such tactics since he had the opportunity to study with such an ethical person as Marie Wormington.

emphasize their lack of knowledge of lithic technology and an inability to correctly conduct or interpret functional experiments. As you say, the paper has some merit, but I find nothing qualified or substantiated. A complete evaluation of their paper would be unfair without seeing their material, but it appears they have based their criticism on their own failure to examine your fine illustrations of a terminated flake. Had they related the illustrations to your writing, I think they would solve their imaginary problem. I agree that there are a number of different kinds of functional flake scar terminations but - on the other hand - did they describe the character of the flake scars due to mishandling; and what constitutes mishandling.

My functional experiments have been very limited but I can tell you of a few conclusions I have reached from these attempts. I find that each function - whether it be chopping, hacking, cutting, scraping, or whatever - produces diagnostic use flake patterns. If the functional motion is in a consistent direction, then the flake removal will be quite uniform and the terminations generally the same - whether this be a feathering termination, a step fracture or a hinge fracture. Also, the angles of these scars will be quite consistent.

I have also had a little experience with scars produced by mishandling and it is my conclusion that these are quite different from the results of a specific functional act. I hardly go anywhere without some artifacts in my pocket and they move around and bang against each other and I find when this happens that the edges will be nicked but I have never noticed the removal of flakesfrom the margins and certainly not in a consistent pattern. Again - I used a large obsidian backed flake to cut about three burro loads of grass from my ditch banks and when the job was completed I could see no functional flake scars on the margins and no polish. Maybe the scars would have shown under a microscope, but I do not have one. I did have some nicks on the margins from contact with rocks on the ditch bank. However, I got a marked polish on the faces of this flake which was the result of the abrasive contact with my dirty hands.

Again, regarding the Simon site material: We found no evidence of a campsite at this spot and no debitage and it is our theory that these preforms and bifaces were transported some distance from the point of excavation. We noted minor random nicks on the margins, but the faces had received a fair amount of attrition - apparently from the movement during the long trip.

How much aboriginal evidence is there regarding the use of opal in Australia? Opal is considerably more fragile than glass and is rarely used in the manufacture of projectile points in North America. Since it is so fragile and would even check under heat produced by certain functions, one would conclude that it would only be suitable for cutting soft tissue. I think there would be a heat build-up even on a sustained action of cutting soft wood. The authors make multiple reference to scraping and appear to ignore cutting - yet Charlie Tjapanyangka, Warburton Mission, uses his tools in an adz-like method to efficiently cut quantities of shavings from hard wood - not as a scraping implement. (Pro. Pre. Society, 1964). Also, it is my observation that scraping and cutting result in very different functional flake scars.

I am pleased to hear of your progress in the lithic lab. You have chosen a fine university and certainly an enviable climate. You will enjoy working with Lew Napton. I have known him for many years and am impressed with his keen interest and ability in many phases of anthropology.

Glad you liked the obsidian from Ed Barry and if and when you need more and would like to try a different variety, let me know and I will send you some from Glass Butte, Oregon.

Junius called last night and it was good to talk with him and know he is back from the torrid Panama site. Sounds like a good site, but he has a few problems of excavating the material. He seems to be in good spirits and says he feels better than he has felt in years. Sorry he is retiring and hear they have filled the job but don't know who got it.

Hope your stint at Alice Springs will be a success. Wish I could be there with you. Start the school on June 11th to July 9th. Then we are free and if we know where you will be in Northern Calif. might take our new camper and have a short visit with you.

Our very best to Betsy.

Your friends,

Don and Evelyn