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Lima, February 17th. 1975.

Mr. Don Crabtree

Dear Mr. Crabtree:

For years I have been reading and hearing through François Bordes and others of your extraordinary achievements in the field of flaking stone objects; and I had hoped to visit you, first to congratulate, and also hoping that you would be kind enough to teach me a few things.

Up to now I have been so busy digging and classifying implements (a unique South American collection of some 20.000 artifacts, all with provenience and placed in stratigraphy) that I never could spare a few extra days during my trips to Europe, where I go twice a year.

A few weeks ago I was at Columbia, lecturing at the University of Missouri, and all my friends encouraged me to write you, suggesting a stop over late in May or early June; my hope is to get more experienced, and to be able to teach a young man who could follow up. It will be very difficult; South American youngsters despise manual works, which I of course do not, but may be I could find a student with more modern ideas? (I am the Director of an Institute of Anthropology and Precolumbian Agriculture, which I have created inside the National Agrarian University of Peru).

In the meantime. I am mailing you (by boat mail, to reduce costs) 4 samples of stone, and hope you will be kind enough to let me know about your reactions.

Sample marked 1 is taken from the rocks forming a ridge a mile away from the Pacific Ocean. Workshops with thousands of flakes and some objects which look like pre-forms. (which Lanning later called "Chivateros") are found scattered over the western (weathered) slopes of these hills.

At first i had believed Lanning; but after a closer inspection, I realize that the stone forming the hills (sample 1) are no good for flaking: they split. The stones used for making the preforms belong to samples N° 2, 3 and 4.

Now why people bring ~~no~~ blocks of such stones up

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~~blocks of such stones up hill~~, to flake them locally? There could be at least two explanations:

1) The chaps used to live up there.

But the protruding rocks are so sharp that one would have to imagine a different scenario: a <sup>g</sup>layer of dust covering them, now brushed by strong winds having occurred after the objects had been flaked.

2) The chaps had their workshops up there, which would mean that some blocks corresponding to samples 2, 3 and 4 could have existed locally?

But:

a) I have not been able to find a single block.

b) Would four so different sediments be found near the surface of a hill not even 1/2 mile long?

May be the chaps used up all what had existed and then left?

Now as to flaking techniques;

- On the North coast, were I have found hundreds of similar preforms, I also have found the worksh<sup>o</sup>p<sup>s</sup> and the quarrie<sup>s</sup>, with large blocks attached to the rock probably used as anvils.

I guess the chaps were hammering split fragments against the anvil?

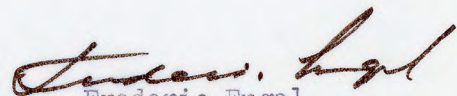
But around "Chivateros", no anvil is visible. How did they flake their preforms out of such a hard stone? And this is why I am mailing you some samples; I am convinced that you will be able to teach <sup>us</sup> a lot about this problem, having some of the stones in your hands.

Enclosed you will find a photo of some of the typical preforms (scale 1:1) and also of an object I have found at the foot of the Chivateros hill. Could it be the next stage in flaking the preform, or would these "preforms" be real implements, in their final stage, Achenlan type or something?

Hoping that you will be kind enough to give us some advice, and that you may accept my suggestion of spending a day or two in Hannibal early this summer, I remain, dear Mr. Crabtree,

With best regards,

yours sincerely,

  
Frederic Engel

P. S. I meet some problems translating my Essay in taxonomy from French

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to Spanish and English. Would the word "chipping" be adequate for describing small narrow reflaking along the edges?

I feel very cautions and have given up suggesting "pressure retouch"; Bordes tells me most of what looks like pressure obtained could have been done with a soft hammer? (I use a Huarango stick a foot long, an inch in diameter).

What I still cannot master is some extremely sharp and ~~fine~~ serrating, something like 0.5mm. or less in width, found along edges of small (1 inch long) implement made of a very hard stone.



It looks like pearls.

Ue .