

1.

Side 2
Crabtree

Well, that's a superb example of flintwork

....

Crabtree ~~This~~ This one appears to be the same ^{Technique} being used on ~~the~~ both ^{of them.}
~~into~~ ^{Both slanting in} that direction.

Bordes Do you think, Crabtree, that this could indicate that the man was ^{could use his two} using ~~two~~ hands, because I think ~~yes~~ when I am doing pressure, I ^{would have no trouble doing} this kind of retouch. ~~was~~

Crabtree It is very difficult to control ~~the~~ ^{the} angle ~~of this~~ with the tolerance of having this flake and this flake meet ~~is almost~~, I mean, ^{the degree of angle} just can't be measured. ~~it is to~~ ^{it is to} perfection. So can you calculate ^{the} your angle ~~in~~ going this way ^{backhand}, and turning, turning, turning it around and going this way and ^{retaining} exactly the same angle. However, ~~this is the last~~ series of flakes ^{is} on this side and they were done from the ^{tip} back toward the base, ~~or there~~, starting from the ^{tip} and ^{flaking} back towards the base in a back-hand ~~sort~~ of technique, ^{considering} sort of thing on here like this, ~~but~~ ^{the} your changes of angles, even with the contour of the artifact itself, ^{require} take a great deal of skill to ^{keep} hold this very ^{constant} angle. I mean, ^{it is like} setting up a machine to calculate ^{in which direction} where you are going to have two points ^{meet}. For instance, if you are going to drill a hole in a bead, you have to balance the hole ^{on} the other side so that ^{the holes on both sides} it will meet perfectly, ^{in the center} and that ^{is similar}

to what they have accomplished here, ~~with this sort of thing~~ and it is certainly a very

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beautiful piece of work. *This could be done by a right-handed man but reversing the platform & along the direction of the flakes. Or it could be done by one ^{would} who is ambidextrous.*

Irwin Williams:

Could you comment on how that ~~could~~ be produced?

Carabree

This looks ^{like} ~~like~~ it is ^{made by} strictly percussion. ~~There might be~~ ^{Just by dragging the} tools, you can get this sort of character. They are random flakes ~~on~~ ^{on} the side, ~~of this one, right here.~~

It's doesn't appear to have any pressure ^{scare} on it. This one ^{has} ~~looks like~~ a peculiar ^{technique} ~~thing~~ of ^{being} retouch ^{ed} again, ^{after the initial flaking} afterwards with a slight basal thinning ~~of the flakes here at this end and some polishing at the base, which is a~~

little unique with this type of hafting, ~~on here.~~ This ^{is} was apparently ^{an example of} gathering here and utilized ~~somebody else's~~ ^{someone} ~~or to retouch that~~ ^{artifacts or blades, and} again at some different date.

And here is another one ~~here of it~~ ^{which} certainly look like some of the Eastern U. S. fluted points.

However, ~~there~~ there is a slight basal thinning ^{on} of this one ~~here~~ as ~~it~~ ^{the artifact} broke ^{it} this hinge back in the other direction ~~on here as it was broken.~~

But with ~~the~~ ^{this} basal grinding it certainly ^{is} very characteristic of some of the work of ~~earlier types.~~

~~some of the very early~~ ^{these} these have a uniformity ^{over here, of this.} This is a

type of

point we see in Southern Nevada, ~~here.~~ ^{They have} ~~We~~ change directions ^{of flaking.} of this type

of roughed-out material ~~of not any regularity~~ ^{with no} appears that they have ^{used} taken a ^{preferred} pattern

such as this, ~~they will~~ ^{then} remove ^{ed} the ridges, ~~this ridge, that ridge, and so on~~

following thru, ^{on the ridges} until they ^{got} a better contour ~~that was~~ ^{of the artifact, prior to the} instead of going ahead

~~with a regular~~ ^{final} retouch, ~~that was~~ ^{as far as they were concerned,} the tool was

functional and ~~provided~~ ^{was} probably, just as good a tool as the other one.

Irwin Williams:

There is an interesting little platform on the base of this one.

Oh, yes, ^{yes,} there is .

Some of them apparently were ^{made} ~~made~~ on flakes or blades.

You can see a little of the original flake, ^{showing} ~~the~~ the scars coming ~~from~~ from a ^{other than} ~~the~~ original ^{flake scars.} ~~face on that particular one.~~ But these little

thick tools, ~~we had another one, oh, this one here,~~ ^{like} ~~some~~ of this sort of thing ^{here,}

~~on here~~ Sometimes, they appear to be ^{quite refined} ~~quite~~ refinements, however, this one is heavily

keeled on one side and fairly flat on the other, while there is regularity with this

one ~~here~~ ^{with} ~~there was~~ no attempt at thinning. Apparently ^{they wanted} ~~wanted~~ a very strong point

for some purpose, whether projectile or what. ~~I'm~~ I'm sure I don't know. This

one up here, this long stemmed point, ^{Phis's} ~~is~~ rather interesting thing here. ~~Rather~~

^{pressure} random flaking but ~~pressure~~ flaking but ^{done with this technique} ~~not~~ in order to get the ^{form} ~~form~~ and ^{there is} ~~know~~

no continuity ^{or} regularity with this ^{one} ~~one~~. Let's see. Did I miss some

of them ~~one~~?

Oh, here's a serrated one you might comment on?

The serrations have been ^{made} ~~done~~ ^{the edges} ~~just~~ by crushing ^{They did not do,} ~~on here~~ with ~~not~~ using their

^{the} serrating flake ^{at the same time as the} ~~as one of their~~ surface flakes ⁱⁿ ~~in~~ forming the ^{point.} ~~point~~ It appears

that they ~~have~~ just crushed in the edge - just flicked ^{it} ~~over,~~ ^{by pressure} with a rodent tooth

or something like that ~~edge by pressure work.~~ The ~~angle of this one here,~~ ^{we might}

^{the angle of this one here,} check that. This is another back-hand. ^{At this meeting, we have seen more evidence of} ~~two~~ more back-hands. ~~the~~ left-handed people

~~that we have found here at this meeting~~ than I have ever seen in my life. ^{This was her} ~~He~~ didn't

have a right hand. But this would almost be an ^{ambidextrous man, flaking} ~~ambidextrous man~~ ~~or~~ ~~type~~ of going

~~in~~ both ~~directions~~ directions.

Bordes: Could be. I think that ~~if~~ ^{if} I am good enough some day ^{to make this kind of retouch} that it will be

very easy for me to make this kind of thing... ^{just changing hands,}

Crabtree: This one appears to be a utilized core, ~~the blan-blanch~~ ^{that's the balance of it.} of it. This doesn't

show a great deal other ~~than~~ ^{than} detaching flakes for making small projectile points.

Was there anything that we missed over here or weren't you ready ^{for them} I'm all thru.

Dawson: ^{no, that comes later.}

Epstein: One question for Mr. Crabtree. ~~Would you show us or~~ ^{explain to} us in more

detail exactly what you mean when you say this could be made by dragging the point?

Crabtree: What I had in mind, Gerry, was this ~~artefact~~ ^{artifact} ~~on~~ here. It shows ^{removal of} some small flakes

in thru here. ~~What~~ ^{the} I mean by dragging is taking ~~your~~ ^{your} billet and pulling it

across the edge, ~~and that~~ ^{which} would square ~~your~~ ^{at the} points. ~~You~~ ^{this can be done} can do this ~~if~~ ^{if} instead

of leaving these projections ^{like an unfinished} ~~along the finished article.~~ ^{these} If you have ~~the~~ ^{the} bulbs and

irregularity ~~they may be when they get back to use these as platforms,~~ ^{on a preform, they may later be used} and, then again,

they may have used ~~them~~ ^{these} as tools, ^{just as they are} if they wanted an agricultural tool for digging or

something like that. It may have been of no ^{importance.} ~~importance~~ but by dragging them sometimes

We have called ^{dragging} ~~it~~ several different things ^{such as referring to it as "shearing"} ~~shearing, too,~~ ^{will} then we have another ~~word~~ ^{word}

for shearing. ~~It is a little bit~~ ^{this may be confusing} using ~~many~~ ^{many} terms that mean the same

thing. ^{But, I think} ~~it is like~~ ^{understands} Dr. Bordes ~~understood~~ ^{understands} when we dragged these billets, ^{as hammerstone} across

the edge ~~and~~ ^{it} gives this sort of a character on the edge.

Bordes: Small flakes. Shocks. ^{Some thing very regular.} ~~Sometimes regular~~ Looks like pressure

Czabtree: This is something very interesting
 ~~That's this bunch here.~~

Irwin
Williams

Now what tool did you think might have been used to produce these?

Czabtree
 tool ~~and~~ It appears to be almost one of ~~the~~ pressure, Very careful placement of the pressure
 following the ridge quite carefully. The end is quite distinctive of the
 type of the Valley of Mexico, ~~ends are the~~ The ends have the same characters that I get ~~in~~ ^{when} producing
 these long prismatic flakes.

Irwin
Williams

Most of the impulsively produced blades you get a little later / have a distinct
 character of this little overhang which is very often not removed and a very heavy
 bulb, even heavier than that.

Czabtree

Is that so?

Irwin
Williams

I don't have any with me, unfortunately, but they look much like you have been
 producing .

Czabtree

This is the only one that I found that was quite distinctive in this array
 here.

Irwin
Williams

It might be something ancestral, very easily. Ordinarily we don't get them coming
 in until the very late ~~ceramic-er-ver-~~ pre-ceramic or very early ceramic.

Czabtree

This is quite an interesting ~~thing~~ incomplete sort of thing, ^{Having the}
~~character of~~ almost ~~the~~ a side struck ~~flat~~ ^{flake} and ^{ing} leave the original cortex
 and almost finishing it ~~as~~ ~~by~~ by pressure.

Tjerner

Czabtree, we spoke about this flint and I think that it is a unfinished one,
 you see.

Crabtree

Yes.

Erwin Williams

Well, I have no objection to it being unfinished one way or another. However, it was part of a burial ^{outfit} that was buried with a woman. And I ~~wouldn't~~ ^{wouldn't} be surprised if, in this case, the thing was just a mint condition artifact, which could have been hafted by that back end there. Very often this is the case ^{of} hafting like this. Because, as I say, this and a long bone awl were crossed at ^{her} their side ready, I suppose, to be used in the after world.

Crabtree

That's quite unique.

Erwin Williams

I never found another one. There's one at ^{El Arbillis in the} ~~Harbelita~~ somewhat later classic

Crabtree

The ~~thing~~ ^{thing} is ~~generally, the~~ ^{is done} preforming by percussion methods, but this appears to have a great deal of pressure retouch, ^{like they} like you were doing the whole thing with pressure rather ^{than} percussion which is a little ^{different} ~~different~~ and unique.

Bordes

They seem to have a little trouble here taking this off, and they did not bother to go on, ^{and, probably, it} didn't matter for them. But you see this kind of thing we meet, well, often enough in some bifacial type of side scraper which looks more or less like a German ^{Blatspader} ~~Blatspader~~ in the North of France in the ^{Etchou? ok} Valley ^{where} you have some ^{bifacial} ~~bifacial~~ tools, follette tools and with this kind of flat ^{thing} ~~think~~ left probably to ^{could} ~~could~~ ^{it better or} the material ~~and~~ things like that. And perhaps the man wanted to make a projectile point and ^{then} ~~then~~ ^{''} said well, after all, it can make a very good knife ^{''}.

Byers

May I ask one question? [?] ~~Byers speaking.~~ Don, did you say that the lama point is a preform or ^{is it} ~~is it~~ finished?

Embree!

It appears to be a finished point . It's just not adaptable for anything else other than just ^{what} ~~but~~ it is. I mean there is just no angle left ~~enough~~ for thinning this down or for changing the character or ~~the~~ shape ^{of the artifact.} ~~of this~~ ~~at all~~. It's a finished artifact, whatever it is. It's not a preform. That was the thing, *Doug. was*

to determine the

~~The~~ difference between a preform ^{and this} ~~here~~ ~~with~~ sort of thing ~~has~~ ~~the~~ ~~question~~

Burdes

You know what you have to do, ^{And when you} you have to make things like that, ~~when they had~~

have

made one or two of them ^{then} ~~no~~ question ^{asked.} ~~there~~.

(laughter)

Epstein

All right, ~~I'm in speaking~~. I will make one.

Burdes

No, not one *but many*.

Laurin Williams

All right, well, I haven't anymore questions. Does anyone else have any

questions on the obsidian lot, otherwise we can move to this other material.

Burdes!

Yea. Let's go to the other material.

~~You want to change, Cynthia, here. No's wrong~~

Laurin Williams

~~Cynthia I Williams here.~~ We are going to go to a collection of casts of ^(ch)

material from somewhat farther south in Mex. ^{Mexico.} These are from the ^{Vasquezillo (sp)} Vasque archaeological

zone south of Puebla, Mex ^{ico!} and they are of considerable interest in that they

occur in direct association in non rolled material with ~~is~~ a rather large

extinct fauna characterized primarily by mammoth, camel, horse, mastadon, a ^{an} extinct

four horned antelope ^{tetramerys (sp)} ~~texmerix~~, and a wide variety of other extinct animals. Now

I have them arranged in essentially what I believe is their chronological order

from above left in sort of a reverse S to lower right. ^{So} that the latest material here is that just in front of Dr. Bordes.

Bordes The oldest is here?

Erwin Williams Well, this is the oldest, these two are probably the oldest collection here, yes.

These first three flake plaques were found directly stratigraphically one above the other. This is from a separate site which we don't have directly dated in relation to the others and so it is probably ^{of} approximately the age of this little collection of flaked points here. I might add that all of the little flaked points, with the exception of this one have occurred in direct association with the bones of, well, camel and mastadon, in these cases. This one was found with a horse kill among the horse ribs. This was among bunch of ~~horse~~ ^{horse} bones, but not probably a kill. So any comment you have on this material will be extremely welcomed. Oh, this material here ^{down on the lower right} was with a mastadon kill, ~~down here on the lower right~~. This, for whatever ^{is worth,} it is ~~worth,~~ scraper or whatever, point, or whatever, was among the mastadon ribs. ^{The} other material was scattered in among the butchered bones. So, as I say, any comments you may have I would be most appreciative of, and the more detailed comments I can have on these the better.

Bordes Well ~~it is~~ ^{to see} ~~is~~ ^{which} I am very much impressed ~~with the~~ ^{in Europe,} tools ~~that~~ have been found in direct association with mastadon. The more because, here, ^{the} mastadon ^{are} ~~is~~ very, very old. I know that they are not so old in America, but ^{nevertheless} ~~nevertheless~~ you know, mastadon that is something else. ^{Mammoth} ~~Mammoth~~ were use to it, mastadon,!

Let's see these flakes one by one.

Phis is
Erwin Williams ~~That's~~ probably just a flake, possibly ~~not~~ used on one side.

Bordes A flake which had been detached by a wood billet or soft billet. That could be a burin of the same crazy kind, as in Alaska, you know, with this pointed tip.

Could well be, ^{could} ~~could~~ well be a kind of burin, you know.

Erwin Williams Well, this ^{was} ~~one~~ directly under the one ~~ela~~ of the mastadon pelvis. *ok up with Wanner or more.*

Bordes I don't know what ^{they wanted to do with} ~~this has to do with~~ a mastadon pelvis and a burin. This, if

^{this} ~~that~~ is a point, it is a rather crude one. ^{of} This is a scraper, it is not a very good

one either. But there is certainly some trace of utilization. That's slightly

retouched looks like ^{a bad end} ~~a bottom~~ scraper.

Crabtree Could be ⁿ an end scraper.

Bordes You know they were rather brave to attack a mastadon with such tools. And that is also a flake with a dihedral platform. Perhaps you could call it convex with a small flake here. It's rather difficult to tell but probably with a wooden or a soft hammer. Some retouch on the concave edge, not much. ^{and} there is also, here, a little bit of retouch. That's not much, you know. It seems that these people ^{have} used anything that they had in their hands at the time they found the mastadon because did they kill it or did they find it dead. That's the question!

Erwin Williams If this is a point, they may have killed it, if not. *we don't have much of a conversation*

Bordes Well, that's a rather small point for rather a big animal.

Erwin Williams But these are smaller.

Bordes Yes, but they are better. This is something else again.

Curwin Williams

~~That was~~ ^{These} people were apparently ~~accustomed~~ accustomed to split the mastadon

mandibles for one reason or another, and this was found imbedded in ~~mandible~~

one of the mandibles just below the teeth row. We took it out in block.

Bordes

That's a completely typical tool. You, know, that's the kind of thing, yes

~~there.....~~ ^{what we call backed-burin-alter - graduating big} ~~What~~

which gives you an edge, a cutting edge like that which is very strong, you

know. With that you can cut like that, you see. Like a burin but a different

technique. This, this could be a point. Oh, ^{you} ~~yes~~, Probably is some kind of

point but it can be also some kind of scraper. Difficult to tell with ~~this~~ ^{this} American stuff.

My impression is that it might be the point end of one of these others.

Curwin Williams Bordes

Ah, that's interesting also. That's just a pointed flake but they had

a kind of stem, a little bit like a ~~Corrobert~~ ^{(a) a bad Corrobert (a) (a) but ... if that been}

~~It had~~ been found in a ~~Corrobert~~ ^{Perigordian (a) (a) (a)} culture in France we'd call it a very bad

~~Corrobert~~ or at least ~~.....~~ ^(Pithecius?) point.

Curwin Williams

I wonder if you will notice here. The platform, apparently, has been faceted

before striking off this ~~long flake~~

Bordes

Very slightly, ~~it can be just rubbing.....~~

It can be just rubbing ~~the~~ ^{the hammer here} to prepare ~~the~~ ^a little ~~bit~~ ^{bit} of platform..

And it seems to have been struck also with a rather soft hammer, with this lip, but

anyway, this hammer was not very wide for it was struck ~~from....~~ *as I do for the blade, you*

know, vertically *P* because over there you have a good bulb.

It looks like a *Z* Levallois point.

And this is the most interesting of all, because there is one question *T* it is certainly a point but was it hafted like that or like that? Looks very much like some *transverse* arrowheads we get in the Mesolithic and Neolithic in our home.

Dr. W. W. Williams ~~Perhaps it will help in that it's position *was*~~

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