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FACULTÉ DES SCIENCES

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LABORATOIRE
DE PRÉHISTOIRE

LABORATOIRE de PRÉHISTOIRE
79, CHEMIN ROULÉ - TALENCE (GIRONDE)

et GÉOLOGIE du QUATERNAIRE

— 33 - TALENCE —

Don Crabt

UNIVERSITÉ
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FACULTÉ DES SCIENCES

LABORATOIRE
DE
PRÉHISTOIRE

73, CHEMIN ROUL
TALENCE (GIRONDE)
TÉL. 92.99.02

Bordeaux, March 11, 1968

Dear Don,

Enclosed the copy of the report I send to Leakey about Calico.

I hope to begin work on THE ARTICLE tomorrow or so, and send it to you in about 10 to 15 days.

No time to flake, no time to write; I did send you, surface mail, some reprints. One of them (did I put several? I do not remember) will interest you.

Our best to Evelyn. Mew for Little Feller and Idaho Jim (still around?). Hello to Gene!

Bien amicalement,

REPORT ON THE CALICO HILLS SITE (California)

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In October 1967, I went for a visit to the Calico Hills site, by invitation of Dr L.S. LEAKEY. I base the following observation on the material already found at that date, and on the sections which were then open.

The site itself does not seem to be a living site or a killing site : No definite tools, no projectile points, ect. It does not seem to be a true workshop, either, since, to my opinion, no true cores have yet been found. The implements seems to be in derived or secondary position, but the relative freshness of many of them, and the mint condition of some, seems to indicate that they did not come from very far away, perhaps some meters or tens of meters. The crushing of the edges could derive from actions on the spot : setting in of the sediments, for instance. However, some are slightly "rolled". The sediment in which they are found (very often unsorted mixture of chert blocks and fine material) did seem to me to be rather of the nature of mud flow than true alluvial gravels. I agree with Dr Clements that this material comes from the nearby Mule Canyon. As for its age, I could not, in a very short trip, evolve a personal opinion, but I agree with Dr Clements that it could be of a Wisconsin interstadial age, or Pre-Wisconsin, if this last term is taken in the "classical" sense, that is, late Last Glacial. From the general impression I had of the region, I would guess at an age well over 20 000, probably between 30 and 50 000 years.

The artefacts.

I spent the most part of one day in the San Bernardino Museum looking at the implements before visiting the site, and I did look again at them after.

Tools : I did not see any evidence of true retouched tools in the material found at the time of my visit. Some pieces can be retouched tools, but they can also be the result of natural actions. In fact, most do belong to types which do occur among man made tools, but are specially numerous in solifluction deposits, where man made flakes have been transformed to pseudo-tools by crushing of the edges, with alternate pseudo-retouch shaping some denticulation, or beaks. Found in other conditions (in a hearth, for instance) they would not be discussed, but I have seen nature-made tools which were even better, from some Eocene levels for instance.

Flakes : The situation is different concerning the flakes. Most of them have naturally crushed edges, simulating "heavy work", but some are fresh and sharp. Many are first stage flakes, with cortex or natural surface on their dorsal face, but many also present a good bulb, a good striking platform, sometimes even faceted. Nature could, given a lot of coincidences, make such a flake, but it seems unlikely that it could, without stressing the coincidences to a miracle, make several of them in a relatively very small area. In addition

there are other flakes, unhappily not very numerous, which, present on their upper surface several flake scars, and are second, third, fourth or even fifth or more stage flakes, meaning that several flakes had been driven off from the chert nodule before this last flake was made. This seems difficult to explain away as the result of natural actions, on a small sample of flakes (about 70). For one flake, it could be possible, perhaps. For several of them, it looks unlikely.

It should however be pointed out that among the flakes, some must have been produced by natural actions, or by rather vicious-minded men : there is a "core" (fig. 1) from which two flakes have been driven off from a rather strangeley located striking platform. But even so, that does not mean that all the flakes were nature made. In the gravels of the Somme River, in France, together with numerous man made artefacts are to be found, from time to time, very interesting pseudo-artefacts.

Another type of Calico flake is also very impressive : they present, on the dorsal face, the trace of a previous flake, the axis of which is identical with the one shown by the lower face (fig. 2). This looks very much like intentional debitage. Again, given 10 000 natural flakes, it could be possible to find something like that. But there are more than 10 of these flakes, on a total of less than 100. A possible explanation would be that the two flakes could have been made at once by a natural hammerstone with two close-by asperities, each one acting as a hammerstone. It happens in man flaking, so it could happen in Nature. But again the odds seems to be against this explanation.

Summary :

A.- In favor of human action at Calico :

Some good second, third, etc stage flakes. Some really big flakes, not smashed or crushed. On natural chert blocks found at the site, only some small or at most medium sized negative scars, none corresponding to the big flakes. Most of the flakes seems difficult to explain away by natural actions either from their types, or from the relative frequency, considering they were not chosen among thousand of "flakes", but on a small number, and were found in a relatively small surface. They seem to occur only in the main excavation, and not, or very rarely, in the other test pits in the fan. They seem to show vertical and horizontal concentrations. The mode of deposition of the matrix seems to rule out strong shocks between the chert blocks, and the medium sized and big flakes are very probably not pressure flakes.

Here are some observations on special cases :

- 194 (P.20 NE 142). Big, second or third stage flake. Good by itself. However, the negative bulb on its back shows some "crushing", so this first flake could be natural pressure flake.
 419 : present a "truncated base". Flake almost fresh. Probably intentional.
 361 : The butt was taken away by a transversal "burin blow". This one could be a true tool. However, crushing on the edges.

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- 394 : Looks like a flake obtained in the making of a bifacial tool. But the lower face looks a little bit like the one from a heavy pressure flake.
- 128 : Fresh flake, obtained in bifacial tool fabrication.
- 344 : Good flake, fresh. There may be the true retouch (not alternate) on one edge. Could be a tool.
- U21 NW 14 (?) ↓ 81. Looks good, but on the dorsal face, the negative bulb is "crushed" (fig. 3).
- 273 : Looks good.
- P. 20 NW 47 NE 69 ↓ 137. Disturbing. Seems good and fresh, but no bulb, no platform, proximal end crushed. Edges slightly crushed, with alternate "retouch".
- S 19 NW 56 NE 64 ↓ 72. "Soft struck" bulb.
- Q 21 W 92 E 74 78. Same thing.
- T 21 W 29 E 18. Fresh state.
(188)
- 314 12 W 23 W - W 50-53. Good flake from fabrication of bifacial tool. Big.
E. 37-40
- P. 23 295 ↓ 64. Good flake, fresh, Levallois like, or from a bifacial tool.
21
The best one (fig. 4).
- #11 R 21 36
NW 10 NE 58 ↓ 48. more or less "rolled", but good.

I have made a rapid tabulation of some characteristics of 67 flakes (fig. 5). The repartition of these characteristics is perhaps significative. There is no third or more stage flake with a strong bulb (on 18 flakes). There are 2 (on 13) flakes of this type in the category "soft struck", and 6 (on 36) in the category : less good bulbs. This could indicate that these third or more stage flakes were obtained in the fabrication of some kind of bifacial tools. Very often, in fact, this type of flake (except when true Levallois flakes) presents either a soft struck bulb, or a not very good one.

B.- Against human actions ~~etiene~~ at Calico :

Most of the flakes are first stage, with can be produced in quantities by natural actions. No true cores. No definite tools, impossible by natural actions. Lot of crushing, either on the edges of flakes or on blocks, showing the existence of rather strong pressures. On disturbing pseudo-core (fig. 1).

Conclusion :

I think there is a very high probability that the Calico Hills site is really a site were primitive man made flakes. If this site had been found in the Old World, very

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few people would doubt it. However, since it would extend considerably the span of man's presence in the New World, this probability has to be transformed in a certitude. This can be done by continuing the excavations till true cores or tools have been found, and/or by plotting the finds vertically and horizontally to see if the implements or flakes present, in their distribution, a pattern impossible to explain by natural actions.

So I strongly recommend the excavations to be continued.

I want to thank here Dr Leakey, who asked me to come and see the site, The National Geographical Society, which provided the funds, Miss R.D. Simpson, who is, very competently, in charge of the excavations, her team, Dr Clements who did much to explain to me the general geology of the site, and, in general, everybody connected with this very interesting research.

F. BORDES

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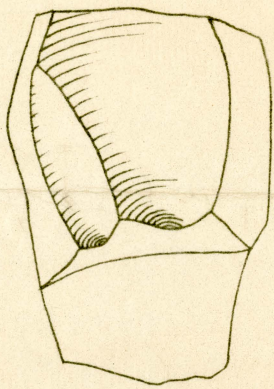


Fig. 1

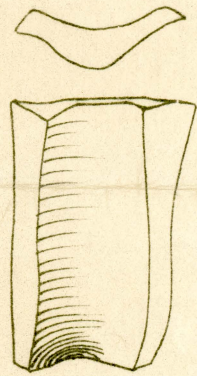
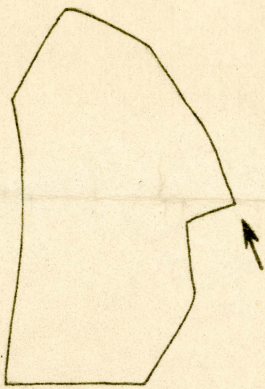


Fig. 2

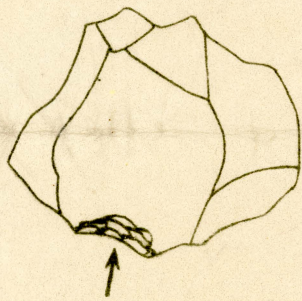
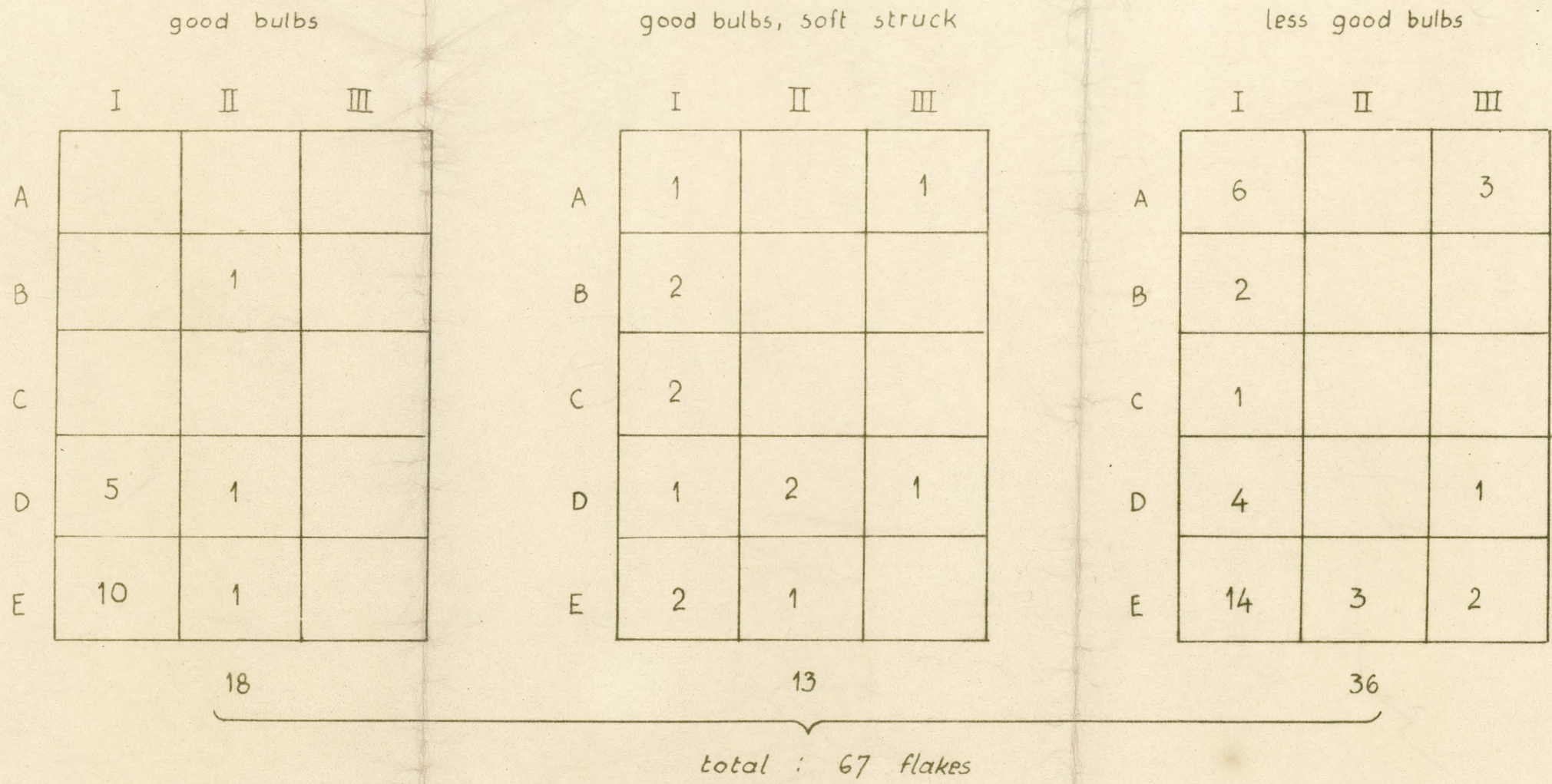


Fig. 3



Fig. 4



A : no platform - B : faceted platform - C : convex faceted platform - D : dihedral platform -
 E : plain platform -
 I : "First flake" - II : second stage flake - III : third stage or more flake

Fig. 5