

difference in age between the two samples. Both are attributed to the same house, Feature 31, which overlies two slightly earlier house outlines, and was then capped by the first mound activity.

Presumably each date can be wrong over and beyond the counting margin of error, but it is difficult to believe that each can be a "correct" or accurate assessment of the true age of the corn. A fairly safe interpretation might be that both dates are suspect; additional samples from the Davis site should be run and fresh samples obtained from a comparable cultural level. I prefer not to wait and will present a case for the reasonable accuracy of A.D. 1300 $\pm$ 175 as dating the *Caddoan pottery complex* of the Phase I occupation at the Davis site. I do not believe that the Caddoan pottery at the Davis site has much to do with the considerable number of dart points at the site, nor do I believe that the "trade" sherds of Marksvilleoid pottery in Phase 2 are later in time than Phase 1. There must have been pre-Caddoan (Gibson) occupations of the Davis area, the most extreme example being the broken fluted blade point assigned to Phase 2, along with the Marksvilleoid pottery.

In my review (Griffin 1950) of the Davis site report, I presented the interpretation that Krieger had not considered the possibility of multiple occupation at the site, that his connections to the Formative of Mexico were not likely, and that his strong urge to correlate Alto and Spiro with the "Burial Mound II" horizon was impossible. I also argued that the Alto focus occupation was relatively short and on a Coles Creek time level.

For archaeologists interested in the problem there is now available the results of the symposium cited above (Campbell 1961) and also of the Fifth Caddoan Conference in the same volume. It is interesting reading, if difficult to follow, because of the diverse interpretations of divers archaeologists.

It is not to be expected that this date will settle the problem of the age of the Davis site Gibson complex, for there are radiocarbon dates which would suggest an age of approximately A.D. 900. But the date given here is close to the age of the Southeastern Ceremonial complex at Spiro, and is certainly closer to the "true" age than the earlier date.

The Davis site report includes an appendix by Volney H. Jones (1949) which consists of a description and discussion of several hundred corn cob fragments from the site. Jones concluded that the corn is primarily of a race called Eastern Complex or Northern Flint. "The butts are expanded, flaring, and quite broad in proportion to the remainder of the cob . . . The cobs are generally circular in cross section but often tend toward angularity; thus 8-row cobs may be somewhat quadrangular, 10-row cobs pentagonal, and 12-row cobs hexagonal." "In most specimens the rows are distinctly paired, usually with a noticeable groove. . . ." However, a few of the cobs " . . . are somewhat elliptical in cross section and taper from the center toward each end" (Jones 1949: 248, 249).

Recent studies of archaeological corn from sites in the East by Yarnell indicate that corn from some Middle

Mississippian sites (e.g., Cahokia, Kincaid, and Steed-Kisker) is primarily of a type that is much like a race of Southwestern corn called Basketmaker or Pima-Papago by Anderson and Cutler (1942: 84). The cobs tend to have elliptical cross sections and taper toward each end. However, some of the Middle Mississippian corn is Eastern Complex, or at least has strong tendencies in that direction.

Old Village corn from Cahokia is only slightly Eastern in composition, but corn from some other Middle Mississippian sites (e.g., Kingston, Crable, Angel, Banks, and Belcher) has more definite Eastern tendencies. In fact, corn from sites all over the eastern woodlands tends to be more strongly Eastern Complex as distance from the Cahokia area increases and as age decreases (cf. Brown and Anderson 1947: 13, Map 1).

The Davis corn is much like that from other Middle Mississippian sites, but it has a much stronger element of Eastern Complex than the corn from Cahokia. Thus there is a strong indication on typological grounds that the Davis corn is younger than the Cahokia corn. Cobs in the lot from which the Chicago date was derived are essentially the same as those from which the Michigan date was derived.

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A FLUTED POINT FROM THE OLD WORLD

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ABSTRACT

A small bifacial foliate from the Solutrean of France suggests that fluted points, whether made accidentally or otherwise, may occur occasionally in the Old World. However, there seems to be no historic relationship with those of the New World.

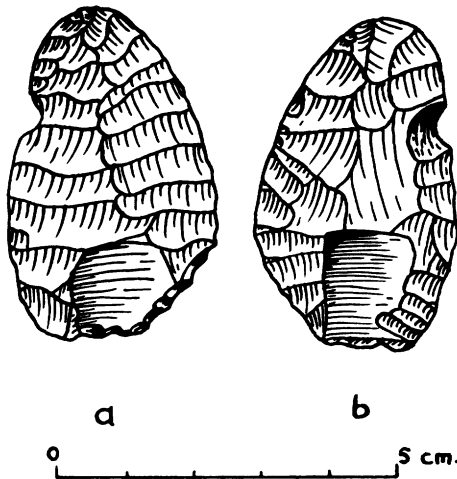


FIG. 1 [SMITH]. Double-fluted foliate from the Solutrean of Laugerie-Haute: West (Dordogne).

IT SEEMS to be generally accepted by New World prehistorians that the fluted points which characterize such early signs of human occupation as Clovis, Folsom and (occasionally) Sandia, are peculiarly New World phenomena, and that no antecedents for them are to be found in the Old World. The claim for their uniqueness has been suggested often enough (e.g., Wormington 1957: 83; Mason 1962: 229, 244, and several of his commentators), and there is no need to go into any résumé of the current position.

However, it may be worthwhile to point out that fluted points of a sort may not be quite so absent from the Old World as is usually thought. I illustrate here (Fig. 1) a specimen I encountered in the collections of the Musée de Préhistoire at Les Eyzies (Dordogne), France, in 1958 while studying the Solutrean and other Upper Palaeolithic industries. The present illustration is from a sketch I made at that time. The piece was found about 40 years ago by Denis and Elie Peyrony (former and present curators respectively of the Musée) when excavating in the classic Upper Palaeolithic site of Laugerie-Haute (Dordogne), and it came from the west side of the site in a Middle Solutrean occupation level. It was not published or described by the Peyronys in their report (D. and E. Peyrony 1938), and in the excavations which F. Bordes and I carried out at Laugerie-Haute from 1957 to 1959 (Bordes 1958) we found no other examples of fluting. However, the form and retouch of this particular piece are, apart from the fluting, entirely characteristic of the local Solutrean, and there is no reason to suppose the piece is spurious.

The specimen is basically a rather small, asymmetrical foliate such as occurs with some frequency in certain French Solutrean levels; a rather similar (but unfluted) example was found by us in our excavations in another Middle Solutrean level here in 1959. The retouch on one face (Fig. 1 a) is fine and delicate, made probably by indirect or controlled percussion to achieve the hori-

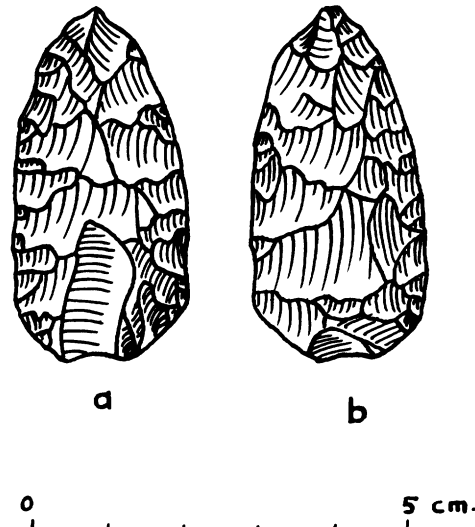


FIG. 2 [SMITH]. Single-fluted point from the Solutrean of Laugerie-Haute: West (Dordogne).

zontal parallel (*en pelure*) flaking. The other face (Fig. 1 b) is less carefully flaked. There is probably some pressure flaking around the edges and at the base, although genuine pressure flaking is always a difficult thing to prove in flint. The channels seem to have been made after the retouch had been achieved, possibly in an attempt to modify or utilize an implement which had been broken, and some abrupt retouch at the base (see Fig. 1 a) was added after the achievement of the longitudinal grooves. The channel in Fig. 1 b is deep and fairly long, ending in an abrupt fracture rather than a sloping arch. On the opposite face the fluting is shallower and shorter. The notch on one edge near the tip seems accidental.

This is a curious piece by any Upper Palaeolithic standards. Had there been only a single channel, it would be possible to dismiss it as an anomaly resulting from an accidental blow or torsion which splintered the base longitudinally. The second groove, however, pretty well rules out this possibility or places it outside the normal range of coincidence. Just what the purpose of the flutings was in this case is obscure; they may have been made to facilitate the hafting of a projectile point or knife, but it must be remembered that we know practically nothing of the real purposes to which Solutrean foliates were put. It is not impossible, of course, that one channel was an accident and the second was a deliberate follow-up resulting from idle curiosity or the urge to experiment which is so apparent in much Solutrean stoneworking. Whatever it is, the result apparently did not have sufficient obvious technological advantage or superiority in its context to encourage the Solutreans to continue the trait. It seems to have been one of those inventions which died stillborn, for I know of no other case of double fluting in the Solutrean. However, there seems to be at least one other case of channeling on a bifacial foliate from the same horizon on the west side of

Laugerie-Haute, but here the fluting, which is probably fortuitous, is confined to one face of the piece; (Fig. 2; see also de Sonnevile-Bordes 1960: Fig. 142, No. 11). Of course, there are many cases of another kind of channeling in the Old World, on Levallois flakes and blades going back to the Lower and Middle Palaeolithic, but in these cases the grooves were made *before* the pieces were struck from the nuclei and involve a quite different technique from that used in the New World or in the Solutrean example described here.

The publication of these specimens should not be regarded as a support for the old hypothesis that some of the early traits of the New World may be directly derived from the Solutrean of Western Europe (for a discussion of this topic, see McCown 1939). Indeed, I have elsewhere (Smith 1962) already stated a belief, based on first-hand study of the French and Spanish Solutrean industries, that there is no historical relationship between the Solutrean, on the one hand, and the industries of Asia and America on the other. Americanists are very probably correct in believing that the fluted point tradition in the Western Hemisphere is a local development, without stimulus in this detail from Old World sources. This might be a good place to remark that I can also see no evidence at all to support Greenman's recent hypothesis that the Solutreans crossed the North Atlantic in skin boats to Newfoundland (where some of their traits supposedly persisted in the historic Beothuk Indians), and thence to the mainland to account for Sandia (Greenman 1960; Greenman, in Mason 1962: 253). Several years ago I examined closely the Solutrean collections from the Bay of Biscay region to which Greenman refers, especially the collection from the site of Montaut (Landes, France), and could see nothing to support the belief except for a few pieces or elements which, taken out of context, might be construed in this way. Greenman's suggestion is intriguing, but the difficulties in explaining away the chronological and geographical contradictions are too great. Nor is there any evidence for transmission across the Atlantic in the other direction.

In other words, the Solutrean points with fluting illustrated here are almost certainly flukes, historically speaking. Possibly there are other occurrences of this phenomenon in the Old World and there may even be a few more unobserved cases in the Solutrean; but fluting was certainly not part of a major or minor tradition in the Old World. However, the purpose of the present note is not simply to present an interesting oddity, but rather to suggest that the real significance of the specimen shown in Fig. 1 lies in the fact that fluting is perhaps not so unique an invention as is sometimes thought. If attempts at fluting could occur sporadically (presumably through accident or whim) in Western Europe, it is not unreasonable to suppose that in approximately equivalent technological or economic contexts such attempts might occur from time to time in other parts of the world. The most interesting problems, of course, are to determine why the invention was so explosively successful in the Western Hemisphere, and to establish the

factors or circumstances which made the invention acceptable and desirable in the Americas but not in the Old World.

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ODDITIES OF FLINT

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ABSTRACT

At variance with published opinion, worked flint sometimes shows pressure-flake scars two inches long, multiple enlacements, and hinge fractures curving as much as 180 degrees.

FLINT IS queer stuff. It does things rarely mentioned in the literature. To consider three of them:

Long pressure flakes. Without naming the experimenter, Oakley (1949) said: "Experiments have shown, however, that in the case of flint it is practically impossible to detach spalls more than half an inch in length by simple pressure." Surely, this is a *non sequitur*, no matter who made this experiment. Suppose Mewhinney goes to a pawnshop, buys a fiddle, practices faithfully for six months, and never learns to play a recognizable tune. Does this prove that nobody in the world can play the fiddle? By no means. It merely proves that Mewhinney cannot play the fiddle.

Actually, it is no great feat, if one uses a rest, to make an occasional pressure-flake scar that runs an inch, an inch and a half, or even 2 inches. The feat would consist in making a hundred such scars consecutively while,