Sandia cave

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SANDIA CAVE

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During the seasons of 1936, 1937, 1938, 1939, and terminating in 1940, the University of New Mexico excavated a cave known as Sandia Cave, in Las Huertas Canyon in the northern end of the Sandia Mountains northeast of Albuquerque, New Mexico. In addition, Davis Cave and Guano Cave, two other cavities of the Sandia group, were partially excavated.

The findings in Sandia Cave are of major importance. The cave fill was stratified with definite cultural objects in various strata, some of which could be identified as paralleling certain other known culture horizons. In the mouth of the cave modern material was present in the form of potsherds. These are of black-on-white types of the Pueblo III period and late Glaze wares such as occur at Pueblo IV and Pueblo V sites in the Rio Grande valley and in the Galisteo district. Other recent accumulation was represented by deposits of guano and pack-rat debris, diminishing toward the rear of the cave. Beneath this modern deposit extended a sheet of cave travertine or calcium carbonate representing a wet period preceding the Recent. This calcium carbonate crust seems to represent the end of the Pleistocene. Beneath this cave crust lies the uppermost of the two main cultural horizons. This one is termed the Folsom occupation because of included artifacts. It is characterized by loose debris cemented into a breccia by calcium-charged waters percolating from above. Below the Folsom floor is a sterile laminated stratum of yellow ochre representing another and earlier wet phase. Below the yellow ochre is the Sandia layer, the earliest cultural stratum of the site. The Sandia layer is less consolidated than the Folsom and contains fire areas or hearths. Below the Sandia occupation, between the Sandia and bedrock, lies an intermittent layer of disintegrated limestone of claylike consistency.

Artifacts of the Folsom layer comprise a series of tools and implements, including Folsom points and other objects considered typical of Folsom times. Classic Folsom points are represented by two whole points and two bases. Three unchanneled Folsom-shaped points are present, as well as one lanceolate Southern Plains type. Five large blades, six gravers, seven snub-nosed scrapers, four side scrapers, ten flake knives, one ivory shaft, and two worked splinters of bone make up the rest of the Folsom series.

The Sandia layer is equally distinctive. Sandia points are generally larger than typical Folsoms, and not so well chipped. These earlier points are distinguished by a side shoulder or notch suggestive of Solutrean points, although no contemporaneity or connection between them and the Old World forms is necessarily implied by such comparison. The Sandia points are further divided into two subtypes, both possessing the side-shouldered feature. Type 1 is lanceolate and rounded in outline. Type 2 is straight-shafted with paralleling sides. Type 1 is apparently slightly older than type 2. The rest of the Sandia collection comprises three snub-nosed scrapers, one side scraper, numerous flakes which may or may not have been used as knives, and two bone points.

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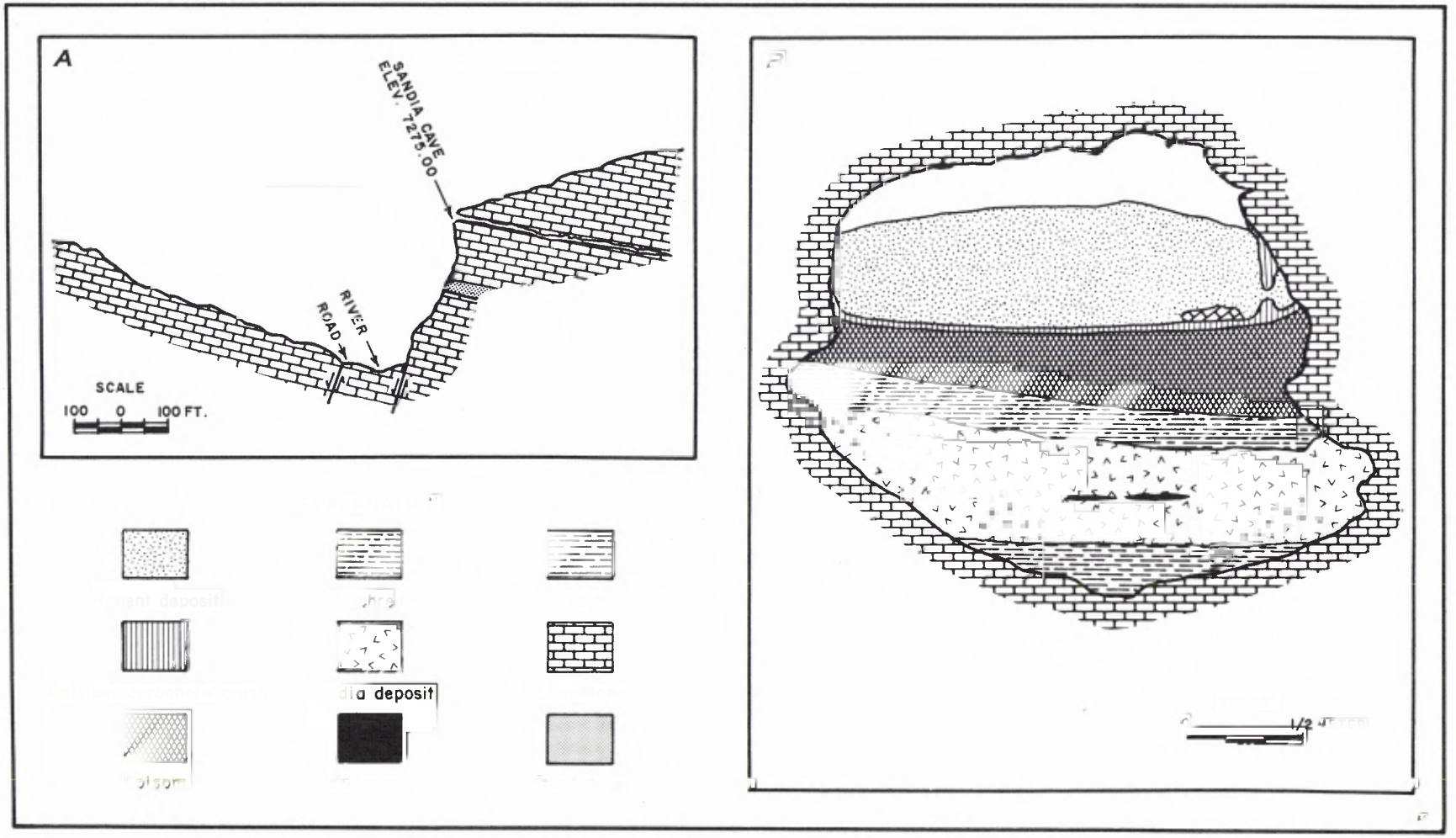
Twelve species of animals are present in all the strata of Sandia Cave. In the recent layer, only the ground sloth is an extinct member. Sloth remains were found only in the lowermost portions of the recent deposit and in the rear of the cave. The Folsom layer is distinguished by horse, camel, bison, mammoth, ground sloth, and wolf. The Sandia stratum includes in its faunal assemblage horse, bison, camel, mastodon, and mammoth. The paleontological grouping of Sandia Cave is chiefly valuable as contributing to knowledge of late Pleistocene and early Recent times. None of the species is particularly distinctive nor are the associations new. The sloth is again indicated as one of the last survivors of the many large Pleistocene mammals which become extinct at the end of that period and in the beginning of the Recent.

In this region and perhaps with validity applicable to a much larger area, a sequence has been erected. This is especially important as it involves the famous Folsom culture, now firmly dated by C-14 dating in the range 9,000-8,000 years before the present. The various components of the sequence occur in the following order:

Recent Pueblo occupation	
Considerable time interval	
Wet period	End of Pleistocene
Folsom	Late Pleistocene or early Recent
Wet Period	Late Pleistocene
Sandia	Late Pleistocene

This sequence involving an earlier-than-Folsom culture again brings to the fore the question of Old World connections. This problem is rendered the more pressing by reason of the remarkable resemblance between the Sandia points and certain Solutrean examples from the Old World. It has already been pointed out by many of those interested (McCown, 1939), that Solutrean cultural relationship is not to be suggested in the case of Folsom man because of the remoteness of true Solutrean (almost entirely within continental Europe) and the complete lack of demonstrable connection between Solutrean regions and the New World across the as yet unknown reaches of Asia. The perhaps fortuitous circumstance that the Sandia projectile points even more closely resemble certain Solutrean examples bring this question even more prominently to the fore. It is well known by those who have studied Solutrean collections in Europe that the bulk of the material is not distinguished by fine ripple flaking and delicately made points. Indeed, European Solutrean is much closer to the Sandia than to the Folsom, especially as the Folsom is distinguished by a specialized facial channel as yet unparalleled in European or Asiatic horizons. However, it is fruitless to discuss Solutrean connection or contemporaneity until Asiatic gaps of awe-inspiring magnitude have been bridged, a possibility at the present time extremely remote.

Folsom and Sandia have been definitely associated with extinct mammal forms and with climatic changes coincident with the last phases of the Wisconsin glaciation. There is no reason to deny these New World cultures an antiquity comparable with European and Asiatic cultural phenomena occurring under similar climatic circumstances and accompanying a like fauna. There is no need for correlations with definite European cultures especially by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name, or even Asiatic ones. Horizons roughly corresponding to Folsom and Sandia have been described from southern and eastern, but not as yet northeastern, Siberia. These are usually lumped under an "Upper Paleolithic" category which is descriptive of a cultural status and time rather than of a European connection by name, although the blade industries of the European levels and the Near East are also represented in Asia (elaborations and variations of Aurignacian, Aurignacian-Magdalenian, and Gravettian). There seems little need to connect New World cultures, whether Sandia, Folsom, or any other, with Asiatic or European cultures when intervening areas, i.e., eastern and northeastern Siberia, are not known. Even Alaska is comparatively untouched as far as the question of the Paleo-Indian is concerned. The Sandia culture has been tentatively dated by radioactive carbon samples of mammoth ivory as 26,000 years before the present.

It is becoming more apparent, as a cultural sequence is being evolved for North America, that the first hunting groups of the New World arrived here in times corresponding to the Upper Paleolithic of Europe and Asia and with a tradition of flint chipping comparable with Siberian centers of the same age. The famous facial channel that distinguishes the Folsom point is but a refinement of a blademaking technique that is, after all, the real basis of differentiation of some of the Old World Upper Paleolithic movements and changes. The Folsom graver is an instrument comparable to a burin although lacking the burin stroke. Refinements of basal technique, such as the striking off of blades, would logically differ in application in widely separated locales especially if contact with the points of origin had long been lost. We may postulate on this basis with fair certainty that the first comers to this continent came armed with a knowledge of blade making and a rudimentary idea of pressure flaking as well. Sandia and Folsom types of flint work represent some of the first variations on these basic techniques of the New World. If the Solutrean was a European outgrowth of this development in one direction, the New World manifestations may be logically suggested as an outgrowth in another, with no direct connection with or knowledge of the Solutrean implied. Climatic and faunal considerations all argue for a similar age. Indeed, it is becoming more evident that both Lower and Upper Paleolithic horizons in Europe, Africa, and Asia represent variant manifestations of the development of a few basic forms, such as the fist ax, the side scraper, and the blade.

In all considerations, the Sandia and Folsom aspects manifest themselves as Upper Paleolithic in character, but with no connection with Asiatic or European phases of specific nature beyond a common sharing of some basic ideas.

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