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THE PASSING OF A CONNECTICUT ROCK
SHELTER.

With Plate IV.

By GEORGE GRANT MACCURDY.

(Contributions from the Anthropological Laboratory of the Peabody
Museum, Yale University, New Haven, Conn., U. S. A.)

MacCurdy—Passing of a Connecticut Rock Shelter.

ART. XLVI.—*The Passing of a Connecticut Rock Shelter*
by GEORGE GRANT MACCURDY. With Plate IV.

OF the several dozen rock shelters in the State of Connecticut, that at Pine Rock in Highwood, a suburb of New Haven, was in many respects the most important. In addition to its occupancy by the Indians, it has an interesting geological history.

To the tens of thousands who annually attend the games at Yale Field, West Rock is a familiar feature. Because of its proximity to the main artery of travel between New York and Boston, East Rock is known to even greater numbers. These are only two of New Haven's four rocks. They form two of the principal parks. The other two, though smaller and in private hands, add to the grandeur of New Haven's natural setting. They rise from the plain between and are so related to the two greater rocks as to form with these a series of four convenient stepping stones for the Sleeping Giant* of Mount Carmel were he to wake from his long sleep. The names of the four rocks in succession are East Rock, Mill Rock, Pine Rock, and West Rock.

The rock shelter formerly known as the "Cave" was on the southern face of Pine Rock. J. W. Barber† gives, perhaps, the first published account of it :

"At the base of this rock there was formerly a cave well known to the inhabitants of New Haven as 'Fry's Cave,' so called from being first occupied by a family of that name, who retained possession of it for several years. In front of this cave there was a small patch of ground which they converted into a neat garden. They obtained a subsistence principally by money received from those who visited their habitation, and by begging. The family of Frys left the cave in 1826, and its next occupants were a colored man and his wife, named McDaniel. These two persons lived in this cave about a year, supporting themselves by making baskets, but in consequence of the death of Mac (as he was commonly called) the cave was deserted. The falling of rocks from above has ruined the habitation and garden, which now has the appearance of a heap of rubbish."

Mrs. Rhoda Wolcott of 729 Dixwell Avenue, still living at the age of 92, is able to supplement Barber's account. She remembers when "Mac" and "Clo" lived in the Cave. When

* Now being beheaded by the Connecticut Trap Rock Co.

† History and antiquities of New Haven, Conn. New Haven, 1831. The location of "Fry's Cave" is indicated on Barber's map.

her father, Chester Alling, killed game he used to send some of it by his little daughter, Rhoda, as a gift to the old colored pair. Mrs. Wolcott says she was very fond of going to the Cave, and often staid with Mac, who was an invalid,

FIG. 1.

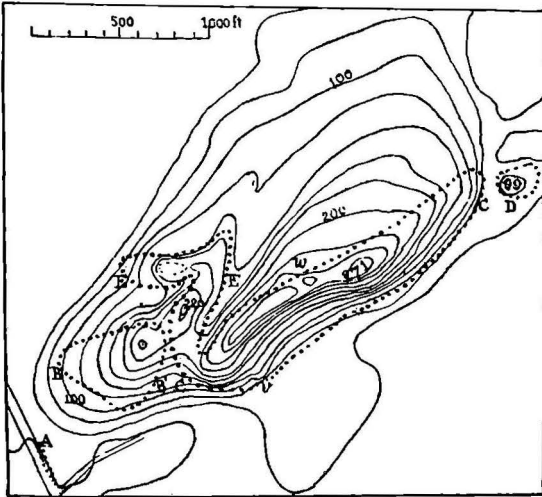
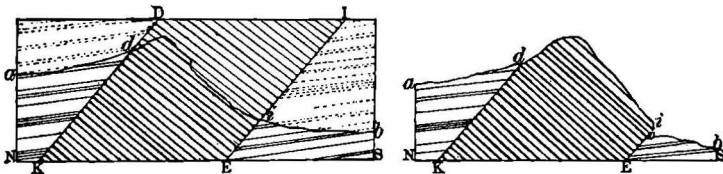


FIG. 1. Contour map of Pine Rock; the Cave is at v. After J. D. Dana.

while Clo went of errands or was away to do a day's washing. They, or some one before them, had built up an artificial front to the cave. Within there were a board floor, cupboard, two

FIG. 2.

FIG. 3.



FIGS. 2, 3. Section of the dike at Pine Rock. Fig. 2, the dike between the sandstone walls, before denudation. Fig. 3, the dike after denudation. After J. D. Dana.

or three chairs, and a table; but there was no stove, only a rude fireplace with stones for andirons, and no chimney. The place was perfectly dry; and according to Mrs. Wolcott, the inmates "really lived like folks." Finally, Mac died; and Clo,

feeling that she could not live there alone, departed, but not until after she had pulled down the artificial front. Another colored man and his wife came and took possession of the cave for a time, although they never made any attempt to rebuild the front, finding evidently that the cave met their needs well enough just as it was.

Mr. W. H. Farnham (brother of the last owner of the Cave), who has lived at the Farnham homestead on Crescent street for sixty-four years, says that the last occupant of the Cave, Indian George, continued to live there until about 1856. Indian George, who had "distinctly Indian features," lived there alone for years as hunter and trapper with only the additional protection that a brush front to the Cave afforded.

The first geological description of Pine Rock is from the pen of James Gates Percival*:

"Crossing an isthmus of the New Haven and Hamden plain at the passage of the Farmington Canal, we meet a similar dike-like range, that of Pine Rock, directed W.S.W. towards the S.E. point of West Rock. This forms a nearly straight ridge, occupied in its eastern part by a higher, more uniform line of trap, abrupt to the South, where it apparently sinks below the level of the adjoining plain, and bordered on the North by a highly inclined mass of indurated (porphyroid) sandstone."

Percival makes no mention of the Cave, or the sandstone formation on the south, which had been removed by nature to form it. The next notable contribution to the geology of Pine Rock was by Professor James D. Dana.† Pine Rock, like all the rocks previously mentioned, is composed chiefly of trap. According to Dana the width of the principal mass of trap (figs. 1-3) at Pine Rock is 300 feet, making it "one of the widest dikes." The dip of the dike is 50° to 55° north-westward, giving to the protecting wall of the Cave an incline of 35° to 40° from vertical. A section of the dike and the sandstone abutting on each side before denudation took place is seen in fig. 2; while a section through the Cave is reproduced in fig. 4. Both Dana and Barrell believe that seashore waves and breakers were the chief agent in the removal of the sandstone on the south side, thus resulting in the formation of the Cave. The surface of the overhanging wall of trap was of fine texture and fissured, showing that it cooled in contact with the sandstone.

The maximum overhang of the wall of trap was fifteen to twenty feet and the habitable portion of the Cave extended for at least one hundred feet along the rock. It was a dry and sunny shelter, facing the southeast. Since being vacated by

* Report on the geology of the State of Conn. New Haven, 1842.

† On the four rocks of the New Haven region. New Haven, 1891.

Indian George, Pine Rock and its Cave had been visited by many classes in geology, but no one suspected that it had been an Indian habitation.

Prior to 1910, Mr. and Mrs. Henry Woodcock of Highwood, local collectors of Indian relics, had noted the presence of quartz and other chips on the surface. The city having failed to take advantage of an opportunity to buy Pine Rock at a reasonable price for park purposes, it was recently partitioned among three or four local concerns that exploit trap rock. That part containing the Cave fell to the lot of A. N.

FIG. 4.

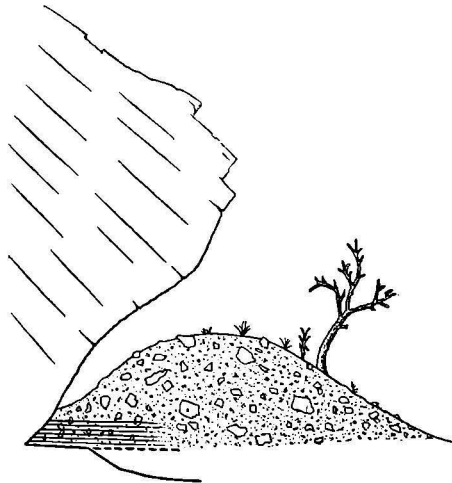


FIG. 4. Section of the Cave as it appeared before the removal of the talus. The relic-bearing deposits are indicated by horizontal lines, beneath which is the level of the sand plain.

Farnham. When he began in 1910 to remove the talus from the Cave preparatory to blasting away the overhanging mass of rock, Mr. and Mrs. Woodcock not only established beyond a doubt the presence of a relic-bearing deposit, but were also able to gather nearly a hundred specimens, chiefly stone implements. They found a considerable quantity of pottery fragments, but saved only a few pieces. Meanwhile other local collectors and even Mr. Farnham's workmen were reaping an archeological harvest; a number of important specimens were also secured by the owner.

The gradual spoliation of the Cave continued over a period of perhaps two years, until on October 18, 1912,

Mr. E. C. Woodcock, of New Jersey, representing the Maltzynie Company, called at the Museum to notify me. He had met the Woodcocks of Highwood and by them had been told of the Cave and the finds made there. That same afternoon I visited the Cave to find it practically emptied. Near the east end were still to be seen a good many sea shells and fragments of bones. With Mr. Farnham's permission, Messrs. Bostwick and Darby of the Museum staff were detailed by Prof. Schuchert to assist me in gathering faunal and other specimens from the kitchen refuse still remaining. In the search, continuing over a period of some three days, several stone implements were found. Cart loads of shells, broken bones, ashes, and black earth had already been removed, most of it going to Mr. Farnham's market gardens.

The condition of the Cave on the occasion of my first visit is shown in Plate IV. A few stone relics were picked up by the Museum staff in the unremoved talus at the right. Evidence of progress in the blasting away of the overhanging trap rock is seen in the upper left-hand corner. The man stands on the sand bench, which served as a floor for the Indian habitation and which is on the same level as the adjoining cultivated fields. A search of the field immediately in front of the shelter failed to reveal Indian relics. Mr. W. H. Farnham, however, has a collection of more than a hundred specimens, including some fine tomahawks and a gouge, gathered by him in former years from fields adjacent to the Cave; and the Woodcocks had previously found many artifacts in the field to the north-east of Pine Rock near the head of Beaver Brook.

According to Professors Dana and Barrell, during an interglacial epoch the sea wore away the sandstone, thus undercutting the trap cliff and leaving the overhanging shelter. The last glaciation swept away all the talus, and upon its retreat the overflowing waters deposited the sand and gravel plains on which New Haven is largely built; the one at Pine Rock is some 75 feet above the present level of the sea. After the retreat of the ice (no one knows how long after, the record having been destroyed), the Red Men came and made the shelter a home evidently for a considerable length of time. The principal deposit they left was exposed to view only after a talus covering of considerable thickness had been removed for road-making purposes.

Copper coins bearing the following dates were found on the surface at the Cave by Carlo Davio: 1784 (or 1754), Georgius II Rex; 1787; 1802, one cent, U. S.; and 1812 one cent.

Another surface find, now in the possession of Mr. A. N. Farnham, is a large stone slab bearing the following incised inscriptions:*

* The commas do not appear on the original.

Figs. 5 to 14.

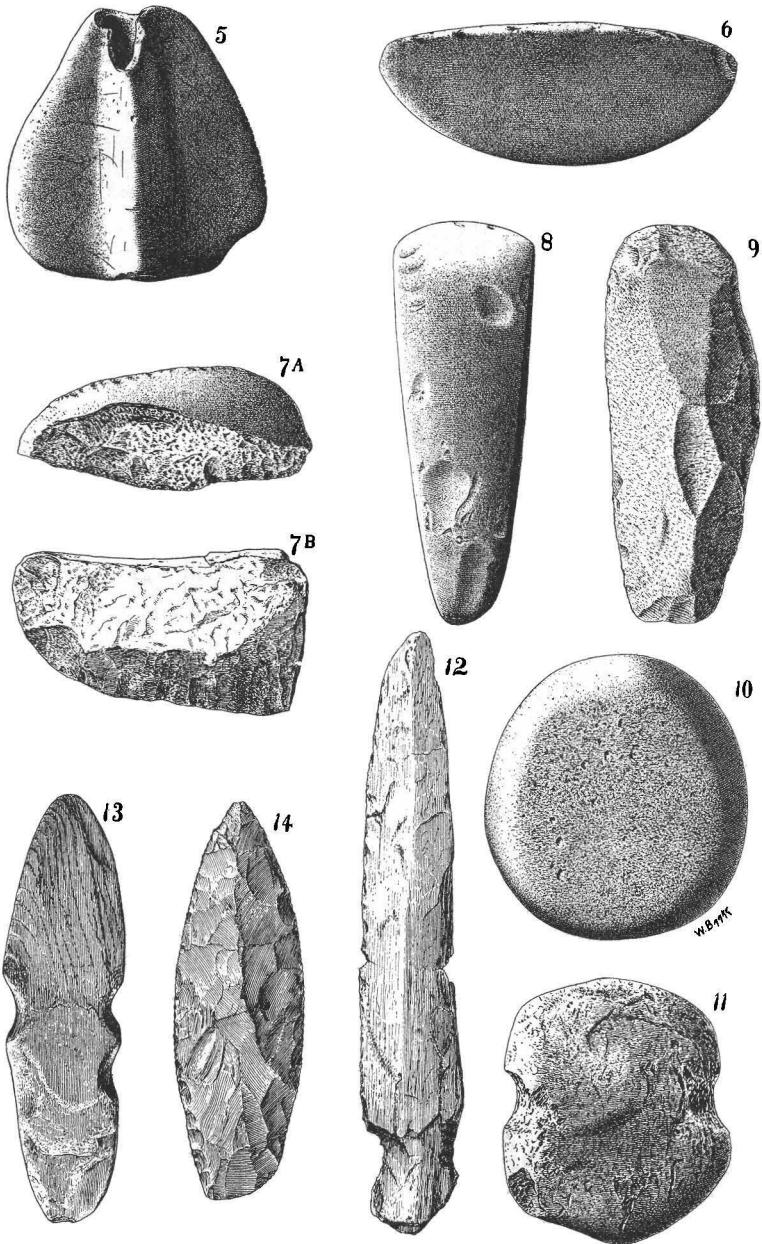


FIG. 5. Banner stone with tally marks along one margin. FIG. 6. Semi-lunar knife. FIG. 7. Quartz knives. FIG. 8. Polished tomahawk of greenstone. FIG. 9. Rude pick of trap rock. FIG. 10. Grinding stone. FIG. 11. Grooved hammer of granite. FIG. 12. Dagger of schist. FIG. 13. Sinker of schist. FIG. 14. Poniard of hornstone. FIG. 12 is one-third natural size; all the others are approximately one-half.

I X B 1753, I Forward 1753; Thomas Williams 1753, John Pell, Jeffrey Smith 1754, W. Williams, Ezra L'hommedieu.

Both Mr. and Mrs. Woodcock insist that there was a thick solid layer of black earth and ashes resting on the sand beach. This layer contained many artifacts and a number of water-worn pebbles of various shapes and sizes carried there by the Indians and for the most part bearing marks of utilization; but very few angular pieces (talus) of trap were encountered. Above was a deposit of talus mixed with more or less black earth and ashes, in which artifacts were likewise found.

If their observation was correct, one of two conclusions may be drawn: (1) The Indians came there so soon after the glacial retreat that a talus formation had not yet encroached upon the floor of the Cave; or (2) finding talus there, they removed it. Had they taken up their abode on the talus covering, some black earth and ashes would have sifted through to the sand bench, but hardly enough to produce the effect of a deposit comparatively free from talus; the presence of artifacts near the sand bench would be even more difficult to explain.

In front of the most protected part of the shelter and near the top of the black layer were two or three wagon loads of shells. Farther to the east were heaps of bones of favorite game animals, chiefly the Virginia deer. Mr. and Mrs. Woodcock estimated the thickness of the black layer at about three feet, which estimate would seem to be confirmed by the author's finding of a fish vertebra still sticking in a crevice of the rock at least three feet above the sand beach.

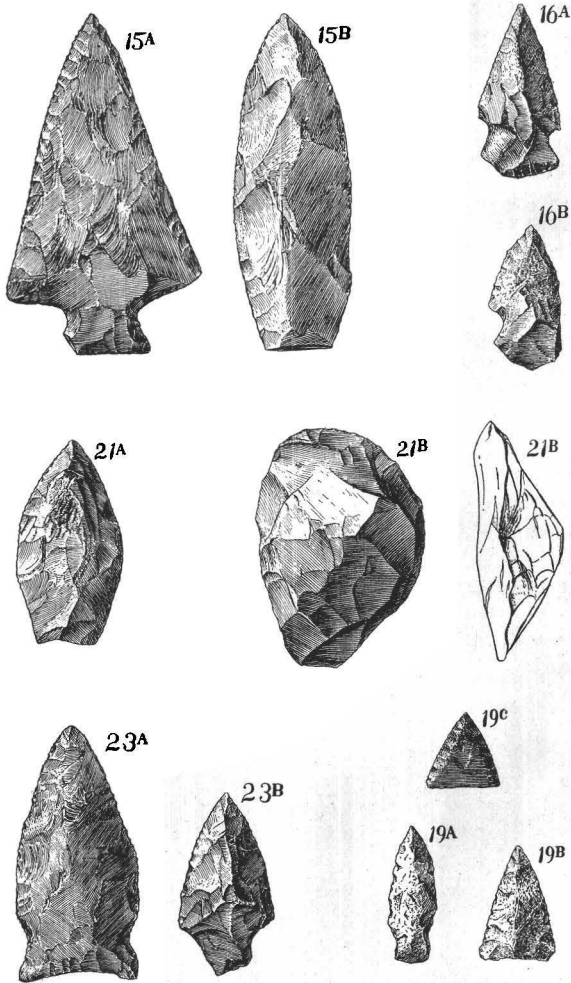
The faunal remains,* exclusive of shell, include: Bear (*Ursus americanus*), Raccoon (*Procyon lotor*), Dog, Lynx, Gray Fox (*Urocyon cinereoargenteus*), Wapiti (*Cervus canadensis*), Beaver (*Castor canadensis*), Porcupine (*Erethizon dorsatus*), Gray Rabbit (*Lepus sylvaticus*), Muskrat (*Fiber zibiticus*), Gray Squirrel (*Sciurus carolinensis*), Field Mouse (*Arvicola riparia*), Whitefooted Mouse (*Hesperomys leucopus*), Turkey (*Melagris gallopavo*), Snapping Turtle (*Chelydra serpentina*), Blackfish (*Labrus tautoga*). Of human skeletal remains Messrs Bostwick and Darby found only two fragments: the upper portion of a bone of the forearm (radius) and a part of the left temporal and sphenoid. These came from the talus near the east end of the cave.

The shells† comprise: *Ostrea virginiana*, *Venus mercenaria*, *Pecten irradians*, *Mya arenaria*, *Modiola plicatula*, *Ilyanassa obsoleta*, *Tritia trivittata*, *Balanus eburneus*, *Crepidula convexa*, *Crepidula fornicata*, *Littorina irrorata* Say, and common species of land shells. The presence of *Littorina*

* Identified by Mr. George F. Eaton.

† Identified by Prof. A. E. Verrill.

irrorata, no longer found north of the Florida coast, instead of *Littorina littoria*, living to-day on the Connecticut coast, suggests a considerable antiquity for the cave deposits. The same



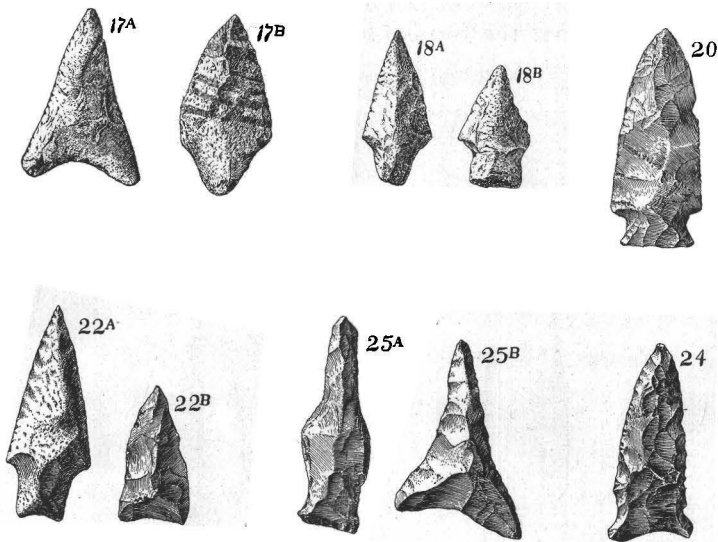
Spearheads and arrowheads, all one-half natural size.

FIGS. 15A, 16, 19c, and 21 are of hornstone. Fig. 15B, trap. Figs. 19A, 19B, quartz. Fig. 23, chert.

is true concerning the presence of Wapiti, which at present is not found in the United States east of the Rockies.

I continued to visit the Cave at intervals for a month. One

day after an extra charge of dynamite had been set off loosening an enormous mass of trap, the foreman warned me not to approach the Cave. That same evening at about 10 o'clock, with a "roar that shook houses in the vicinity and awoke the inmates of Springside Home," a mass of rock estimated at thousands of tons, in fact all that remained of the overhang, and reaching up and back to the top of Pine Rock, became dislodged and fell like an avalanche, burying several nearby



Arrowheads and drills, all one-half natural size.

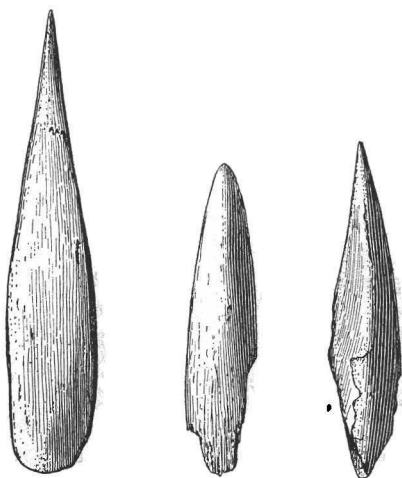
FIGS. 17, 18, are of quartz. FIGS. 20, 22B, and 25A, hornstone. FIG. 22A, quartzite. FIG. 24, felsite porphyry. FIG. 25B, trap.

piggens owned by Mr. Farnham. The number of killed and injured swine is said to have been over two score. The workmen would have met a similar fate had the accident occurred during working hours. The noble shelter has completely disappeared, but thanks to the generosity of several local collectors, the Museum possesses the major part of the relics found there. The two-fold regret is that the removal of the deposits could not have been scientifically controlled, and that the shelter itself could not have been spared as a sort of outdoor annex to the University Museum. Of the specimens figured all we know is that they came from the Cave. There is absolutely no record as to the relative positions of the various objects in the relic-bearing deposits.

Compensating in part for the lack of scientific control in the removal of the deposits and the destruction of the shelter itself was the ready and generous coöperation of nearly all the local collectors into whose hands specimens from the shelter had found their way. Mr. and Mrs. Henry Woodcock gave their series of nearly 100 specimens. Next in point of size was the combined gift of Frank, James, and Tony del Greco. Oscar and Harry Olson presented their collection of 24 specimens: and Wilbert Bennett, who had found but one artifact, gave that. Two small collections were purchased and the collection of Mr. Farnham, the owner, has been loaned to the Museum.

FIG. 26a.

FIG. 26b.



FIGS. 26a, 26b, Bone points; fig. 26a is one-half, fig. 26b, two-thirds natural size.

The industrial remains from the Pine Rock Cave are similar to those to be seen in collections gathered from the cultivated fields of southern Connecticut. There is, for example, a single banner stone (fig 5); its height is somewhat greater than its spread of wings and along one margin are several tally marks. Banner stones are not very plentiful in the state. The only semilunar knife (fig. 6) has an unusually sharp edge and a plain back. It is made of slate. Two quartz knives of simple workmanship are reproduced in figure 7. At least one of these is chipped from a waterworn pebble, the original surface of which is retained over a portion of one side.

Only one polished celt or tomahawk (fig. 8) has thus far been

reported from the Cave. The surface is smoked and greasy as if it has been about the camp fire a good deal. A tomahawk of nearly the same shape was recently found by Mr. Dwight B. Pangburn, in a field bordering on Konold's Pond, less than two miles northwest of Pine Rock. Both are of greenstone. Very little use was made of trap, the rock that formed the shelter. One of the few trap artifacts to reach the Museum is a rudely chipped pick (fig. 9).

Several grinding stones made of pebbles were secured, the best one of which is seen in figure 10. A crude, partially grooved hammer of granite (fig. 11) is the only one of its kind

FIG. 27.

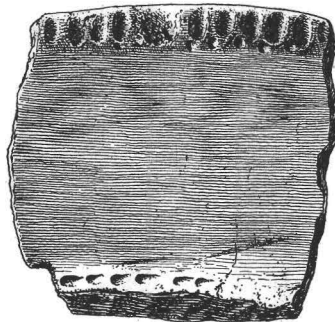


FIG. 27. Potsherd showing rim decoration. Natural size.

reported. Equally crude are the large dagger (fig. 12) of schist, and a sinker (fig. 13) of the same material. The schist for these two specimens and the slate for the semilunar knife could have been obtained in the neighborhood of Maltby Lakes.*

A fine leaf-shaped poniard or spearhead of hornstone is reproduced in figure 14. Of notched spearheads, also hornstone, figure 15 is a good example. The arrowheads include the notched and triangular types. In two cases there is but a single lateral notch at the base; one of these is reproduced in figure 16. Quartz and varieties of hornstone were chiefly used by the arrow-makers (figs. 17-21). There is one arrowhead of quartzite (fig. 22) with a very sharp point and finely retouched margins. Of flints there are but one or two cherty specimens (fig. 23). Drills were scarce. Two types are represented in figure 25. The one with narrow base is of hornstone and the other of trap.

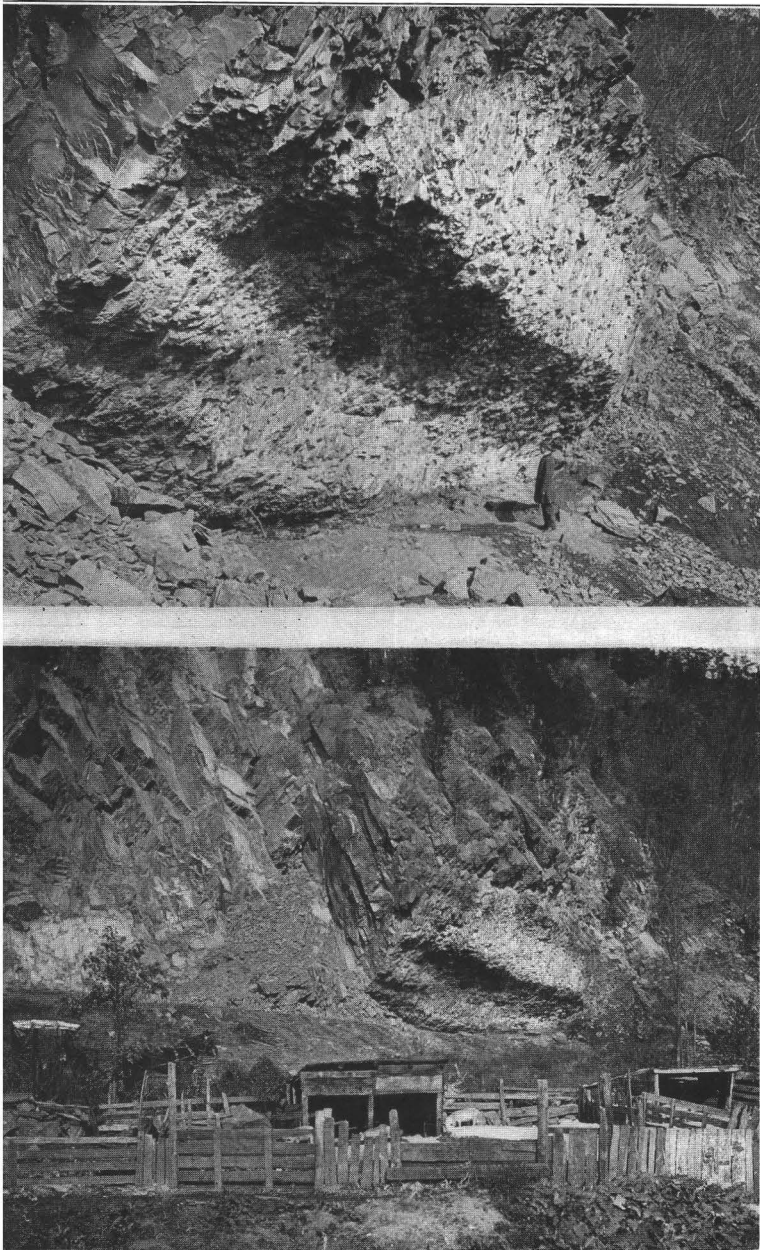
The scarcity of bone artifacts recovered is due in part perhaps to the fact that they did not attract the attention of

* Rock determinations are by Professor Joseph Barrell.

the collectors so readily as did the stone artifacts. Only three specimens, all three bone points, were secured (fig. 26); as two of these were found by our Museum staff, the probability is that many more were carted away with the refuse.

Of pottery a good many fragments were noted by the Woodcocks. Neither they nor the other collectors thought it important to save the potsherds. The sherds preserved belong to two varieties, one of rather fine quality with decorated lip and neck (fig. 27), the other crude. Unfortunately it is not known at what level the pottery was encountered, or whether the two kinds were at the same or different levels.

American archeology has always been handicapped by the lack of chronological data. These can never be supplied by surface finds. Among the possible sources of such data, caves and rock shelters should rightly be counted. The destruction therefore of a cave record like that at Pine Rock is nothing short of an archeological calamity.



The Cave at Pine Rock as it appeared on the occasion of the author's first visit