

REPORT AND COMMUNICATIONS.

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REPORT

PRESENTED TO THE

**Cambridge Antiquarian Society,**

AT ITS THIRTY-SEVENTH ANNUAL GENERAL MEETING,

MAY 28, 1877,

WITH AN ABSTRACT OF THE PROCEEDINGS OF THE SOCIETY

1876—1877.

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ALSO

**Communications**

MADE TO THE SOCIETY.

No. XIX.

BEING No. 1 OF THE FOURTH VOLUME.

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PRINTED FOR THE CAMBRIDGE ANTIQUARIAN SOCIETY.

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CAMBRIDGE ANTIQUARIAN  
COMMUNICATIONS,

BEING

PAPERS PRESENTED AT THE MEETINGS

OF THE

Cambridge Antiquarian Society.

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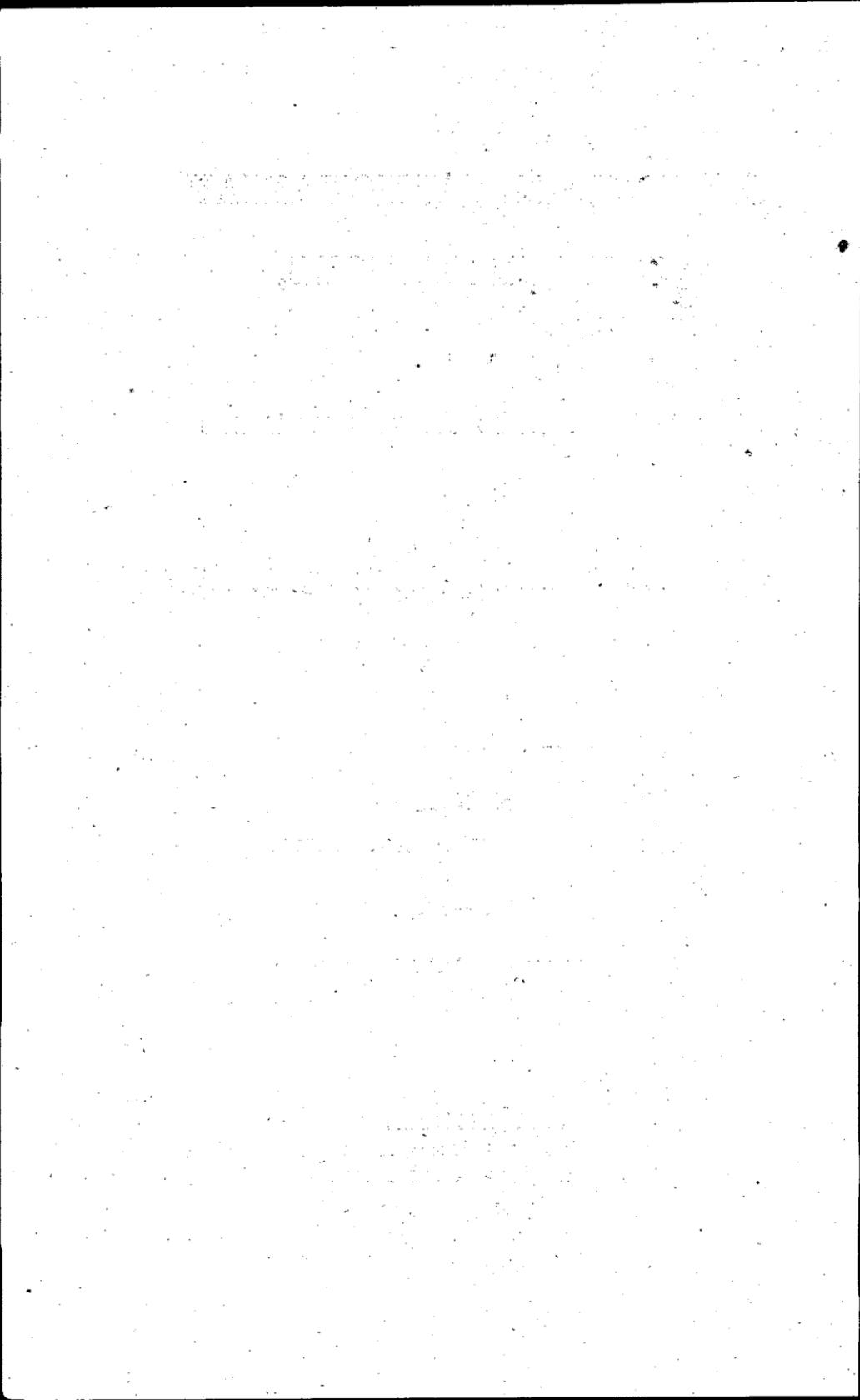
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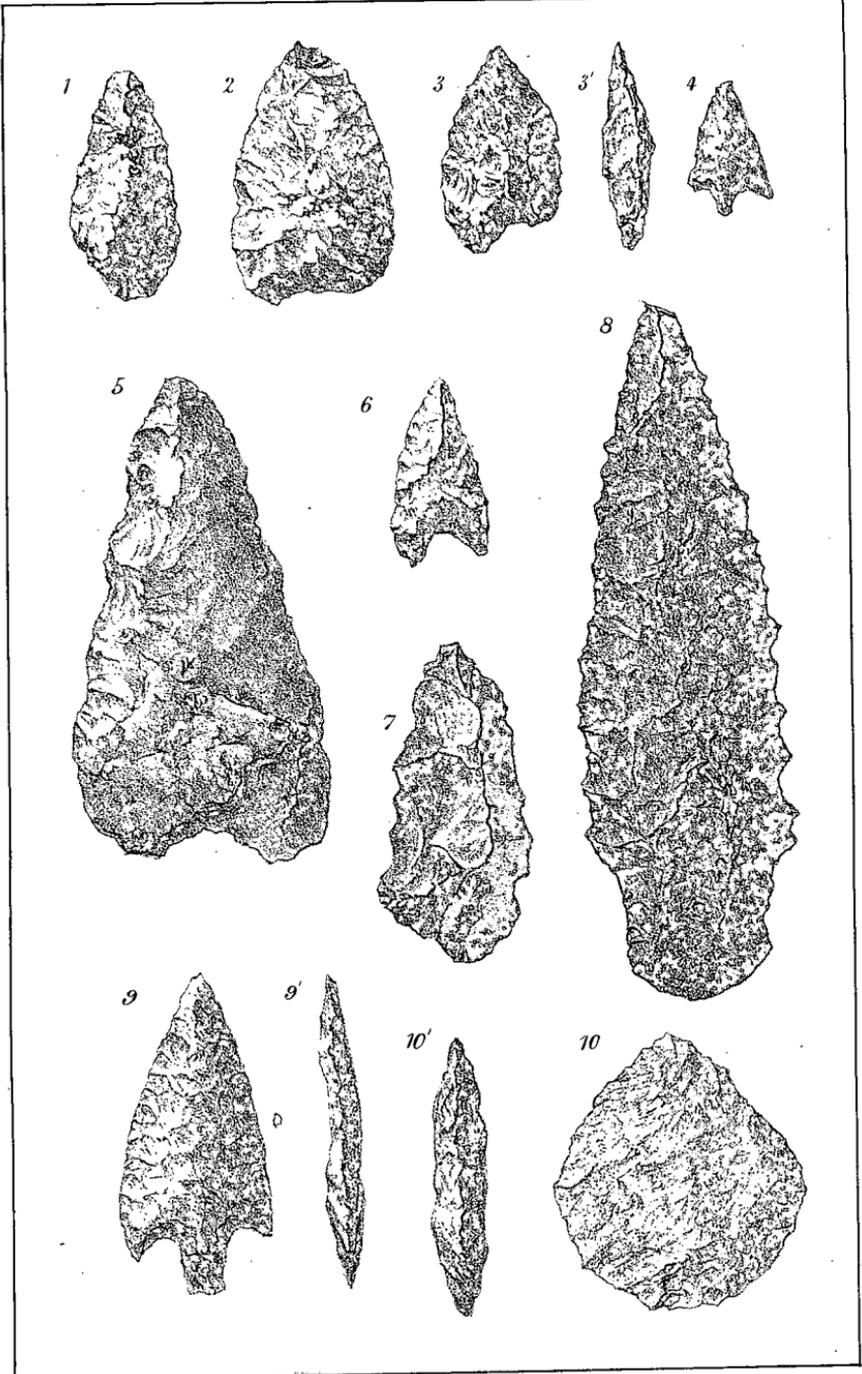
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1878





All those figured are varieties of quartz and chert except N<sup>o</sup>7 which is a kind of jasper, and N<sup>o</sup>8 which is a red porphyritic felsite. 3 is a Section of 3 & similarly 9 and 10' of 9 and 10 respectively. All are drawn to the exact size of the original.



IV. ON SOME PRE-HISTORIC PERUVIAN STONE IMPLEMENTS. Communicated by A. J. DUFFIELD, Esq.

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[Nov. 27, 1876.]

THE collection of flint, porphyritic, granite, and silici-calcareous implements on which I am to address you to-night originally consisted of twenty-one arrow and spear-heads, lancets and gravers; but after being lent to various learned persons for examination, their number has been reduced to sixteen; the missing examples were exquisite things wrought in burning opal. To prevent any further diminution of objects so interesting as these, I beg to offer them to the Cambridge Antiquarian Society for their acceptance.

The collection, although small, is the largest ever made of similar antiquities from that country.

It is also of importance to note that the collection was made by my friend Captain Jeffry, who resided two years in the district where the implements were found, that I procured them direct from him, and that I subsequently visited the ground, and added to the number a couple of the implements of my own finding. The genuineness and authenticity of the objects may therefore be said to be undoubted.

The gully and river of Pisagua, where these ancient remains were found, is on the coast of Peru, in south latitude  $19^{\circ}$ , and about forty miles north of Iquique. This gully runs for more

than sixty miles east and west through a desert, and a desert of the most repulsive aspect. Not a bird is ever seen in the air, nor an insect on the hot burning sand; no animal or reptile of any kind visits that blasted strip of the earth's surface. Not a drop of rain ever falls upon it, and the only moving thing is the fine sand, which is carried in blinding clouds, when a strong wind blows from the south over the defenceless plain. Another movement occurs once or twice in two or three years, when the earthquake dashes in pieces the rocks and strews their fragments over the ground. The strength of this movement is written plainly enough on the rocks themselves as well as on the face of the earth which is torn asunder, here in yawning fissures, there in curiously formed caverns, and everywhere scored in splits and scratches.

The rocks in situ consist of granite, coarse-grained granite, red sandstone, syenitic granite, porphyry, felspar porphyry, trachite porphyry and slate.

The river, when at its very best, is not more than ten feet wide, while for nine months in the year it is quite dry. It never has force enough to reach the sea, its strength being apparently exhausted in trying to boil the great boulders which lie in its bed.

The tool-bearing sands appear to be confined to the gully and the bed and sides of the Pisagua river. When the implements about which I am now talking were found, they were coated with sand and gravel, and cemented with a sort of breccia.

Whether palæolithic or neolithic will no doubt form an interesting topic of discussion by your society.

Are these examples of human workmanship of the same age as the beds of gravel in which my friend and I found them?

Of that there would seem to be no doubt. If there be any doubt, the discussion it will provoke cannot fail to be of the greatest interest.

If the spear-heads are compared with some examples from Lake Superior, which I found there, they will be seen to correspond in form and finish exactly, although the former be composed of porphyry and the latter of flint.

The arrow-heads, the gravers and lancets are pretty much alike also, except that they are not so broad, are of a much finer material, and more perfect in finish.

While in North America these weapons and tools have been found wrought in *metallic*, by which I mean native copper, no such use appears to have been made of copper by the ancient Peruvians, although metallic copper abounds almost to the same extent in the Andes and the Atacama desert as in the region of Lake Superior.

The reason for that, no doubt, is that native copper as found in South America is, when hammered into shape, much less hard than porphyry or opal. In North America the native copper is, in a certain well-known district, where implements of war were found wrought in copper, mixed with rhodium, which gives to copper great hardness. And it may be remarked in passing that the art of hardening copper, supposed to be known to the ancients but now lost, may be nothing but an art of nature's own, if anything produced by nature can be so designated. Copper and rhodium in certain proportions yields an alloy harder than that which is produced by man from copper and tin. The copper daggers, some eighteen inches in length, found more than twenty feet below the sand on the south shore of Lake Superior, were free from a single trace of oxidation, which would be another proof of the presence of rhodium.

But to return to Pisagua. At about a height of 3000 feet, and less than 70 miles from the shore, is a motionless sea of a chemical substance called nitrate of soda. The great abundance of iodine salts contained in the remarkable deposits above Pisagua is proof enough that that high ground was once an inland arm of the sea.

On this level was found the smaller of the porphyritic spear-heads deeply embedded in a natural cement, and how many thousands of years it may have lain there will be always a matter for speculation.

Three hundred years before the Spanish Conquest this part of the coast was thickly populated by a people who knew how to make the earth fruitful, and keep it so; a race of whose rulers it has been said their feet never trod the desert, but there sprang up a garden.

Garcilazo tells us that in the reign of Inca Pachacutec so thick were the people along this coast that an army of more than 60,000 men was needed to conquer them. Even at the time of the Spaniards' advent this valley was compared to an ant-hill, for the number of the people and their industrial pursuits. *Now* the only things to show that any people ever occupied that part of the once flowering earth are these simple tools and weapons of stone which I present to you.

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