

PALÆOLITHIC FRESCOES AND MURAL ENGRAVINGS.¹

ATTENTION has already been drawn in NATURE (vol. lxxv. p. 299) to the recent discovery of large mural decorations by Palæolithic artists, and as the subject is of such extraordinary interest we do not hesitate to give a further account of the more recent discoveries of like nature.

M. Capitan and Breuil presented at the meeting of the Paris Academy of Sciences of June 23 a communication describing some paintings on the wall of the cavern of Font-de-Gaume in Dordogne. Of the eighty figures which are painted in red ochre and manganese black on the walls of the cave, forty nine are of bisons; all are engraved and painted, but sometimes the surface of the rock has also been scraped; a thick layer of stalagmite has covered many of the designs. The original of the figure of the running bison that we reproduce has a length of 1 m. (39½ in.) and a height of 60 cm. (25½ in.); it is entirely painted in a brown colour with a red tint on the forehead. These are the first frescoes recorded for France, as the engraved designs from the cave of La Mouthe, published by M. Émile Rivière in 1895, were rarely and, even so, but partially coloured.

M. Henri Moissan has analysed the colouring matters employed by the Palæolithic mural decorators, and finds that they are ochres composed of oxides of iron and manganese in variable proportions.

At the meeting of the Academy on July 28, M. Émile Rivière drew a distinction between the true frescoes described by the former authors and his own discoveries in the cave of La



FIG. 1.—Fresco of a Bison, Font-de-Gaume.

Mouthe, also in Dordogne. The latter are almost exclusively more or less deep engravings or shallow markings produced by scraping or scratching the rock. Two of the figures present some traces of paint; one of these represents a ruminant, perhaps *Bos priscus*; the contour only of the hind limb is coloured a blackish red-brown, especially at the level of the joints and hoofs; the left flank of the animal is marked with ten spots of the same blackish-brown colour, extending in a line from the shoulder to the upper portion of the thigh. The other design represents a kind of hut, not engraved by a simple line which indicates the contour as in the numerous animals represented upon the walls of La Mouthe, but by a scraping of the rock. Ochre (possibly mixed with manganese) has been applied superficially to portions of the scratches in such a manner that the colour is much less deep than in the former figure; it is laid on in a series of bands approximately parallel and alternately clear and dark. This is the only known drawing of a habitation of primitive man.

M. Rivière does not commit himself as to the contemporaneity, or otherwise, of the engravings of La Mouthe with the paintings of the Font-de-Gaume; but he reasserts that the figures of La Mouthe are undeniably Palæolithic (Magdalenian), and, geologically speaking, of the Quaternary epoch. The prehistoric

¹ "Reproduction des figures paléolithiques peintes sur les parois de la grotte de Font-de-Gaume (Dordogne)." By M. Capitan et Breuil (*Comptes rendus Acad. Sci.*, Paris, t. cxxxiv. p. 1536); "Sur les matières colorantes des figures de la grotte de Font-de-Gaume." By M. Henri Moissan (*l.c.*, p. 1539); "Les figurations préhistoriques de la grotte de La Mouthe (Dordogne)." By M. Émile Rivière (*l.c.*, t. cxxxv. p. 265).

artist who engraved them was the contemporary of the reindeer and of the mammoth the portraits of which he delineated.

In a recent number of *l'Anthropologie* (t. xiii. Mai-Juin, 1902), M. Emile Cartailhac gracefully acknowledges that he was wrong in doubting the genuineness of the pictographs of animals painted on the walls of the cave of Altamira in Spain. He gives two illustrations of these frescoes, one of which (Fig. 1, p. 351) contains a group of seventeen animals, drawn with spirit and with a considerable degree of accuracy. The Altamira artist, or artists, evidently belonged to the same "school" and period as that of the Font-de-Gaume artists. A. C. H.

SEA TEMPERATURE VARIATIONS ON THE BRITISH COASTS.

THE Meteorological Office pilot chart for September contains very interesting information relating to the temperature of the sea water round the coasts of the United Kingdom in the month of June last. Over nearly the whole of the Atlantic between the 30th and 50th parallels the temperature for the month was below the average, in many places the deficiency amounting to 5° and upwards. This fact is clearly shown on the general chart, but two small charts have been added to illustrate a remarkable change experienced close inshore. Daily records at a large number of coastguard stations and lightships disclose the prevalence of very cold water during a considerable part of the month, and a rapid increase of warmth towards the close. The extra sketches exhibit the mean results for June 1 to 24 and June 25 to 30 respectively. Along the western and southern coasts, many of the minimum values during the cold

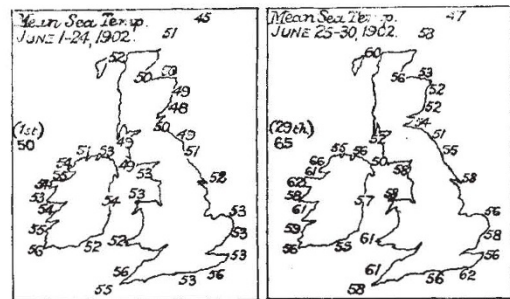


FIG. 1.—Sea Temperature Variations on the British Coasts.

period were as low as 48° to 52°, the lowest in several places occurring as late as the 15th of the month. Off Eastbourne, 54° on the 8th and 9th was the lowest June record in nineteen years. On the east of Britain and west of Scotland the minima were from 42° to 48°. Before the end of the month the west and south coasts were generally above 60°, and the east and north 55° to 60° and upwards. Up the north-western shores the temperatures were higher than in any other neighbourhood, the maxima being registered on the 28th or 29th as a rule. Stornoway and Seafield touched 66°, Ballyglass 67°, Liscannor 68°, Teelin Head 70°, and Blacksod Point 72°. Even the Orkneys reached 60°, while Eastbourne did not pass 62°. Confirmation of these very high readings in the north-west is afforded by the records of ships well out in the offing, the observations in about 55½° N., 11½° W., showing 50° on the 1st and 65° on the 29th.

Judging by the mean results for the two periods, the greatest change took place off Teelin Head, Donegal, where the closing days averaged 12° warmer than the previous part of the month. Blacksod, to the south, was 8°, Arran Island 7°, Seafield 5° and Minard 4° warmer, while Ballydonegan, at the south-west extremity of Ireland, showed no change. Northward from Teelin Head we find a rise of 8° at Stornoway, 7° at the Orkneys, and, curving southward down the coast of Caithness, 6° at Cromarty. The warmth scarcely affected the Shetlands, where the increase was only 2°. Eastward past the north of Ireland the effect diminished rapidly, the rise at Sheephaven being 4°, at Port Rush and Lamnah 3°, and at Ballantrae 1°. For the warm period the Orkneys equalled and the Hebrides exceeded by 2° the result at Scilly, 58°. It must be remembered