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EUROPE BEFORE THE ARRIVAL OF MAN.

IN looking over any modern historical narrative — such, for example, as Knight's History of England — one cannot fail to be struck by the disproportion between the amounts of space devoted respectively to ancient and to modern events. Of the eight bulky volumes of Knight, the first covers a period of 1432 years, from Cæsar's invasion of Britain to the death of Edward III.; the second, bringing us down to the death of Henry VIII., covers 170 years; the third takes us 95 years further, to the beginning of the Great Rebellion; while five volumes are required to do justice to the two centuries intervening between the overthrow of Strafford and the repeal of the corn-laws. This is due partly to the greater complexity of modern life, and partly to the increasing abundance of our sources of information. It is true, we have to go back a long way before we encounter an absolute scarcity of information; there was a great deal more literature in the Middle Ages than is commonly supposed, and it is possible to describe many long past events with great minuteness and accuracy. Mr. Freeman devotes the greater part of a volume of 768 pages to the political and military history of England during the single year 1066. But the history during the spring of 1815, if treated with equal

thoroughness, would fill a good many volumes as big as this; and this is owing largely to our increased wealth of materials. When we go back far enough and encounter a positive dearth of material, we can devote but a few pages to the history of a century, as in the case of the earliest Teutonic invasions of Britain; or, as in the case of the long ages before Cæsar's invasion, we can barely say that such and such races of men inhabited the island, and we can give little or no account of what they did. This is one reason why we find it so hard to form and preserve an accurate mental picture of the duration of past time. It requires a deliberate effort of the mind to realize, for example, that the interval between the proclamation of Constantine the Great by the Roman legions at York and the invasion of William the Conqueror was exactly equal to the interval between the latter event and the accession of George IV., or the adoption of the Missouri Compromise. We may *know* that it is so, but in order to make it *seem* so most people will have to stop and think.

The case is somewhat similar when we try to realize the relative duration of the successive geological epochs in the history of the earth's crust. We are naturally inclined to overrate the relative duration of the later epochs.

Mountains supported enormous glaciers, and the same was the case in Asia with the Himalayas. It was during these recurrent periods of arctic cold that the reindeer and musk-sheep found their way to the south of France, while over land-bridges at Gibraltar and Malta the leopard and elephant retreated to Africa. In the intervals between these glacial periods, when the climate became milder than it is at the present day, the arctic mammals traveled northward again, while the lion returned to chase the bison and elk in the forests of Yorkshire.

As the result of these prolonged and repeated climatic vicissitudes, and of the complicated migrations entailed by them, many of the Pliocene mammals still living in Europe at that time have become extinct, — such as the gigantic beaver, the cave-bear, the sabre-toothed lion, five species of deer, three species of elephant, and two of rhinoceros. One race of men — known as the “men of the river drift” — had taken up their abode in Europe when these great changes were beginning, and struggled with the extremes of climate like their enemies, the bears and hyænas. The discovery of flint knives has abundantly

proved that man was living near the site of London before the big-nosed rhinoceros had become extinct, and before the arrival of the musk-sheep and the marmot in the valley of the Thames heralded the slow approach of the northern ice-sheet. But the fact that human remains of a date even more remote than this have also been found in Portugal and California shows, as I have said already, that man was then no new-comer upon the face of the earth, but must certainly have been in existence for many thousands of years, though as yet we are unable to assign either his primeval habitat or the precise epoch of his first appearance.

This “man of the river-drift” seems to have become extinct during the Pleistocene period, like the great mammalia above mentioned; and his place was supplied by a hardier race from the north, — the so-called “cave-men,” of whom the modern Eskimos have been thought to be a surviving remnant. Of the Arrival of Man in Europe, and of the probable antiquity of this era of recurrent ice-sheets, at the beginning of which he made his appearance in Gaul and Britain, I shall have something to say in another paper.

John Fiske.

AN ECHO OF PASSION.

IX.

It was September now, and for two nights some invisible incendiary had been at work applying the torch of autumn to a tree or a bough, here and there. In the fresh, dewy haze of morning, the glowing foliage lit the village street and the long post-road and the green-cloaked stretches of the country on either hand with spots and spires of magical color.

When the stage drove up to the hotel, with Mrs. Eulow balanced in a desirable place on the top, there were, fortunately, not many of the remaining boarders at hand to notice that Fenn was going with her. Ethel was there, nevertheless, herself soft as September, in her leaf-tinted *crêplisse*; rosy, calm, and sweet. She bade them good-by with many good wishes, and then they drove off through the lovely and inspiring landscape. The drive to the rail-