2000 feet above the present upper limit of the glaciers, or the level of any existing adequate abrading agency. The bowlders and scratches have been traced beyond Geneva, even to Lyons, and to Vienne, in Dauphiné.

A second epoch of glaciation is generally supposed in Europe to have followed a period of depression like that of the Champlain period, as mentioned beyond. J. Geikie makes the number of Glacial epochs in Europe five; but four counting from the epoch of maximum glaciation. In his *Ice Age*, of 1894, he recognizes in Great Britain six epochs, two of them after the Great Baltic glacier, or 4th. The *first* epoch in each case preceded the deposition of the Cromer Forest bed (page 927).

But the lofty mountains of Scandinavia — now in some peaks over 8000′ in height and glacier-covered, and then probably 11,000′ or 12,000′ — were not far distant, so that the glacial deposits of Great Britain might well bear evidence of the fluctuating conditions in the ice arising from modifications of climate and other causes. Oscillations in the deposits from till to stratified gravels and the reverse may have required no great length of time, and need no other cause. As Krapotkin, of Russia, says (1894), "The oscillations of the fringe of a vast ice-sheet may account for the formation of the layers which are described as interglacial. The considerable changes which must occur in the directions of flow of the ice-sheet may account for the crossing of striæ and erratics, as well as for the occurrence of interglacial beds." The deposits referred to as marking the intervals are not such as would necessarily have demanded, in each case, a long period of time.

It is a remarkable fact that no ice-mass covered the low lands of northern Siberia any more than those of Alaska. But recent accounts report that "the High Plateau of Asia, which stretches northeastward from the Himalayas as an immense triangle having its summit at Bering Strait, bear unmistakable traces, where studied in the region of the gold mines, of having been covered with thick sheets of ice. This is true of the border mountains of the High Plateau, the Himalayas, the Tian-Shan, the Altai, the Sayan, the Great Khingan, and others. With these few data, the only plausible hypothesis is that all of the High Plateau above 2000 feet to the north, above 3000 feet to the east of Lake Baikal, above 5000 feet in the middle portions, and still higher farther south, were covered with ice" (Krapotkin, 1894).

Over the southward slopes of the Himalayas, evidences of glacier action have been observed down to a level, 2000 feet above sea level in the Kangra Valley; to 4700 feet on the southern slopes of the Dháoladhár; and to 5000 to 7000 feet in many valleys of Sikkim and eastern Nepaul. They occur also on Mount Antilibanus in Syria, in latitude 34° N., on the Atlas Mountains in northern Africa, and on Mount Kenya, a peak about 18,500 feet high, not far from Kilima-Njaro, in British East Africa.

In South America, indications of a great ice-mass are met with, from Fuegia, as far toward the equator as the parallel of 37° S., and especially, as Agassiz has shown, in the great valley between the main chain of the Andes and the Coast Mountains, to the latitude of Concepcion. Besides, glaciers had great extent about some of the higher summits along the Andes, and one near the equator. A. E. Douglass, of the Harvard College Observatory at Arequipa, has reported the existence of glacial phenomena of great extent,