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FRIDAY, OCTOBER 25, 1895.

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VIEW OF THE ICE AGE AS TWO EPOCHS, THE GLACIAL AND CHAMPLAIN.*

THE present paper supplements that presented by the author in the Proceedings of this Association a year ago, which showed the Quaternary era as divided into the Lafayette, Glacial and Recent periods. The Glacial period or Ice age is here more particularly reviewed, and is found divisible into two parts or epochs, the first or Glacial epoch being marked by high elevation of the drift-bearing areas and their envelopment by vast ice sheets, and the second or Champlain epoch being distinguished by the subsidence of these areas and the departure of the ice with abundant deposition of both glacial and modified drift. Epeirogenic movements, first of great uplift, and later of depression, are thus regarded as the basis of the two chief time divisions of the Ice age. Each of these epochs is further divided into stages, marked in the Glacial epoch by fluctuations of the predominant ice accumulation, and in the Champlain epoch by successively diminishing limits of the waning ice sheet.

Studies by many observers have shown that both in North America and Europe the border of the drift along the greater part of its extent was laid down as a gradually attenuated sheet; that the ice retreated and the drift underwent much subaërial erosion

* Read before the American Association for the Advancement of Science, Sept. 2, 1895.