

The glaciers of Heard Island and Kerguelen have, no doubt, been carrying down moraine material into the sea, and this is certainly done on a still greater scale by those of the Antarctic continent. This sends off bergs which fill the whole ocean south of  $60^{\circ}$ , and float much farther north. Some of them have been seen 2,000 feet long and 200 high, and though most of the boulders they contain are necessarily concealed, yet masses of rock, supposed to weigh many tons, have been seen on them. The whole sea bottom off this continent, as far south as  $64^{\circ}$ , consists of blue mud, with boulders and pebbles, some of them glaciated, and farther north there is, as far as 47 degrees of latitude, a considerable percentage of drift material, and this sometimes in depths of 1,950 fathoms. It is evident that, if large areas of the southern hemisphere were elevated into land, we should have phenomena to deal with not much unlike those of North America at present.

Perhaps no discussion carries with it more of warning to geologists to exercise caution in framing theories than this of the great ice age; and if the collapse of extreme views on this subject shall have the effect of inducing geologists to keep within the limits of well-ascertained facts and sound induction, to adhere to the Lyellian doctrine of modern causes to explain ancient phenomena, and to bear in mind that most great effects involve not one cause, but many co-operating causes, it may lead to consequences beneficial to science; and so, emerging from the cold shadows of the continental glacier, we may find ourselves in the sunshine of truth.

REFERENCES:—"Acadian Geology," 1st ed., 1855; 4th ed., 1892. Icebergs of Belle-Isle, and Glaciers of Mont Blanc, *Canadian Naturalist*, 1865. "Notes on Pleistocene of Canada," Montreal, 1871. Papers at various dates in the *Canadian Naturalist* and *Canadian Record of Science*. "The Ice Age in Canada," Montreal, 1893. Canadian Pleistocene, *London Geological Magazine*, March, 1883. Flora of the Pleistocene, *Bulletin of Geological Society of America*, vol. i., 1890, p. 311, Dawson and Penhallow.