On the Marine Shells brought by Mr. Drexler from Hudson's Bay, and on the occurrence of a Pleistocene deposit on the Southern shore of James' Bay.

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Mr. Drexler, who last summer visited the south-eastern shores of Hudson's Bay, under the auspices of the Smithsonian Institution, has brought home some shells which it will be of interest to notice here, since nothing has been hitherto published upon the molluscous fauna of that region. The physical conditions of the bay do not seem to be favorable to any great development of true marine mollusks at the present day, though we have evidence of an abundance of deep-sea species at a former epoch. The waters of the bay are now mostly shallow and somewhat brackish.

Cape Hope, the point at which the marine shells were collected, is situated on the eastern side of James' Bay, in latitude about 52° 10′ N. Only three species of these shells were found alive, but these occurred in great numbers, above low water mark. They were

Mytilus edulis L.
Macoma fragilis O. Fabr. (*T. grönlandica.*)
Littorina grönlandica Chemn.

The *Littorina* reaches a large size, (0·65 inch,) and is probably identical with *L. tenebrosa*. We cannot distinguish it from specimens from Greenland.

The following species were found dead at Cape Hope, perhaps washed out of some pleistocene deposit, as they are the characteristic species of that period.

Rhynchonella psittacea Ch.
Pecten islandicus Müll.
Cardium islandicum Ch.
Astarte arctica (Gray.)
Astarte striata (Leach.)
Mya truncata Lin.
Admete viridula (O. Fabr.)

The specimens of *Cardium* were much eroded on the outer surface, leaving sharp, distant, crenulated, concentric ridges, as in those from the pleistocene of Lake Champlain.

The southern part of James' Bay is so shallow that even small boats must go out of sight of land to find water deep enough to enable them to float at low tide. This part, called Hannah Bay, forms the embouchure of the Hannah river, in which Mr. Drexler collected many fresh water shells, chiefly elongated *Lymneæ*, and large *Planorbes*. In a box of these shells we found a considerable number of marine species, evidently fossils washed out of the river banks, indicating the existence there of an extensive marine pleistocene deposit. The following is a list of the species, which, with one exception, are deep water forms.

Mytilus edulis Lin.
Nucula expansa Reeve (*N. tenuis.*)
Yoldia portlandica (Hitch.)
Leda pernula (Müll.)
Macoma sabulosa (Spengl.) (*T. proxima.*)

Of these, the *Yoldia portlandica* was most abundant, about twenty specimens being found, with valves united, among which there were forms exactly corresponding to *Y. siliqua* Reeve, which appears to be only a variety. This species is now found living in the Arctic seas, where it was dredged by Capt. Sir Edward Belcher. We may here remark that we have met with living examples of *Astarte*, exactly corresponding to *A. laurentiana*, so that none of the boreal pleistocene species yet found in North America can be regarded as extinct.