

prevailing in the same latitude. Out of twenty-three shells obtained in that locality from argillaceous strata twenty feet thick, two only, namely, *Nucula Cobboldiæ* and *Tellina obliqua*, are extinct, and not a few of the other species, such as *Leda lanceolata*, *Cardium groenlandicum*, *Lucina borealis*, *Cyprina islandica*, *Panopæa norvegica*, and *Mya truncata*, betray a northern, and some of them an arctic character.

These Chillesford beds are supposed to be somewhat more modern than any of the purely marine strata of the Norwich Crag exhibited by the sections of the Norfolk cliffs NW. of Cromer, which I am about to describe. Yet they probably preceded in date the 'Forest Bed' and fluvio-marine deposits of those same cliffs. They are, therefore, of no small importance in reference to the chronology of the glacial period, since they afford evidence of an assemblage of fossil shells with a proportion of between eight and nine in a hundred of extinct species occurring so far south as lat. 53° N., and indicating so cold a climate as to imply that the glacial period commenced before the close of the newer pliocene era.

The annexed section will give a general idea of the ordinary succession of the newer pliocene and post-pliocene strata which rest upon the chalk in the Norfolk and Suffolk cliffs. These cliffs vary in height from fifty to above three hundred feet. At the north-western extremity of the section at Weybourne (beyond the limits of the annexed diagram), and from thence to Cromer, a distance of seven miles, the Norwich crag, a marine deposit, reposes immediately upon the chalk. A vast majority of its shells are of living species such as *Cardium edule*, *Cyprina islandica*, *Scalardia groenlandica*, and *Fusus antiquus*, and some few extinct, as *Tellina obliqua*, and *Nucula Cobboldiæ*. At Cromer jetty this formation thins out, as expressed in the diagram at A; and to the south we find No. 3, or what is commonly called the 'Forest Bed,'