

nomena the most decidedly boreal of the group. Every rock-surface on which it rests is grooved and striated; almost every softer pebble which it encloses is scratched and furrowed, usually in the line of its longer axis; all its larger shells exist as broken fragments, often rounded as if by attrition, and bearing in their lines and scratches marks of the same agents that dressed the rocks and scored the pebbles; nay, the very substance and color of its prevailing clays show that it is mainly composed of the dressings of the rocks on which it rests,—all giving evidence, apparently, of a time when our half-founded country sat from eight hundred to a thousand feet lower in the water than it does now, and vast packs of grinding icebergs went careering over what are now its lower hills and its higher table-lands.

The Clyde beds and their contents belong apparently to a still later time. Their largest shells are usually in a state of great entireness and fine keeping. I had the pleasure of laying open, two years ago, at Fairlie, on the Ayrshire coast, a virgin deposit unknown before, in which I found continuous scalps of *Pecten Islandicus* still occupying the place in which they had lived and died, and with their upper valves covered with large balanæ, such as we now dredge up from the outer limits of the laminarian zone, and all fresh and unbroken. Huge *Panopæa* were there sticking fast in an unctuous clay, with their open siphuncular ends turned upwards; and entire specimens of *Cyprina Islandicus* and *Modiola Modiolus*, with their valves still connected by the sorely decayed ligament. *Tellina proxima* was abundant, but reduced in size to little more than half the Gamrie dimensions. I found *Astarte elliptica* the prevailing *Astarte*; and groups of younger *Cyprina* huddled together in the character — which they do not now assume on our coasts — of gregarious shells. No crushing iceberg had passed over this deposit: a grooved and polished rock of Old Red Sandstone