

*Cardita borealis* on the New Jersey coast, where it is certainly an alien.

In the absence of requisite data concerning the distribution of marine life in the arctic and subarctic seas, we shall be very materially aided by tracing the course of the yearly isothermal lines; and more especially for our purpose that area of the Atlantic ocean comprised between the line of  $40^{\circ}$  and  $32^{\circ}$ . The line of  $40^{\circ}$ , according to Professor Henry\*, begins in America at the Northern portion of Nova Scotia. This agrees well with Gould's and Forbes' designation of Cape Breton, as being the dividing point between the Acadian and Arctic provinces. The line of " $32^{\circ}$ " indicates the boundary of the region within which the average temperature is below the freezing point. It will be seen at a glance, that, instead of being circular in its outlines, it has the form of an irregular elongated ellipse, the greater diameter of which is across the pole, from the southern extremity of Hudson's Bay, to the south of Lake Baikal, in Siberia." Upon the map accompanying the report, the line is made to pass through the lower third of the eastern coast of Labrador, dividing Cape Farewell from the remaining portion of Greenland, and touching Europe at Finmark in the vicinity of Nordland, one of the most southern of the Lofoden Islands. Thus to the north it shuts out a vast circumpolar region, including the northern portion of Hudson's Bay, with all of Baffin's Bay; and upon the European side it includes Spitzbergen and Nova Zembla. We are therefore confirmed in our opinion formed before meeting with these meteorological facts, that this elliptical area embraces a belt of fauna of a subarctic character; and in the supposition that the fauna of Labrador and the Newfoundland banks has an European equivalent fauna in Finmark, occupying an extent of perhaps some 400 miles along the coast from Nordland to a point somewhere beyond Cape North.

Brunswick, Maine, Aug. 1863.

#### EXPLANATION OF THE FIGURES.

- Pl. s. 1. II. Fig. 1. *Lepralia producta* Pack.  
" 2. *Membranipora solida* Pack.  
" 3. *Menipea fruticosa* Pack.  
" 4. *Halophila borealis* Pack.  
" 5. *Myriozonea subgracile* D'Orby.  
" 6. *Buccinum cretaceum* Reeve.

\* Meteorology in its connection with Agriculture. Patent Office Report on Agriculture, 1856.