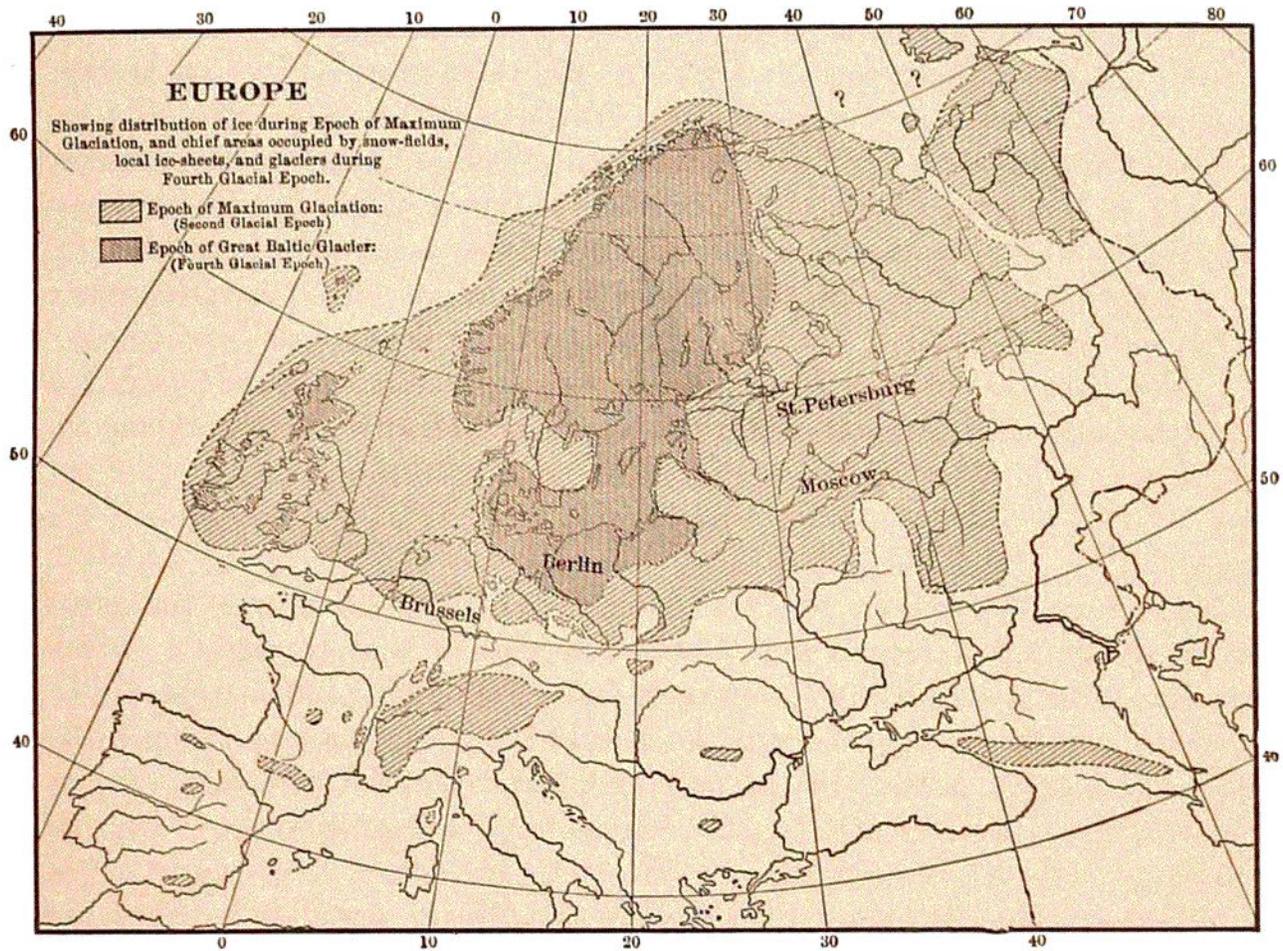


centers, as the Highlands and Southern Uplands of Scotland, the mountains of the Lake country in northern England, and the Snowdonian heights in North Wales; but only England received boulders from Scandinavia.

1552.



The height of northern Europe, if it was such as the fiords indicate, was sufficient to make dry land of the German Ocean (it being generally under 500 feet in depth, and 800–1200 feet along the Norway coast) and join Great Britain and Ireland to the continent, besides giving these islands widely extended borders on the Atlantic side. The depths of some Norwegian fiords vary from 2000 and less to 4020 feet.

The drift phenomena are exhibited on a grand scale about the Alps, especially along the valleys of the Rhone and Rhine. Lines of stones and gravel, and even great boulders, have been traced (first by Professor Guyot) from the Alpine summits about Mount Blanc, by the valleys of the Trient and Rhone, to the plains of Switzerland, and thence over the sites of Geneva and Neufchâtel to the Jura Mountains on the borders of France; and the declivity of this range, facing the Alps, is covered with the boulders; one of them, the Pierre-a-bot,—a mass of granite (or more properly protogine),—is 62 feet long by 48 broad, and contains about 40,000 cubic feet, equivalent to a weight of 3000 tons.

Moreover, the valleys of the Alps have their sides nearly horizontally grooved or planed, to a height of 10,000 feet above the sea, or more than