

gathered in the opposite hemisphere. He might observe that the great oceanic area of the Pacific and Antarctic Oceans is dotted with islands—like a shallow pool with stones rising above its surface—as if its general depth were small in comparison with its area. He might also notice that a mass or belt of land surrounds each pole, and that the northern ring sends off to the southward three vast tongues of land and of mountain chains, terminating respectively in South America, South Africa, and Australia, towards which feebler and insular processes are given off by the Antarctic continental mass. This, as some geographers have observed,¹ gives a rudely three-ribbed aspect to the earth, though two of the ribs are crowded together and form the European-Asian mass or double continent, while the third is isolated in the single continent of America. He might also observe that the northern girdle is cut across, so that the Atlantic opens by a wide space into the Arctic Sea, while the Pacific is contracted toward the north, but confluent with the Antarctic Ocean. The Atlantic is also relatively deeper and less cumbered with islands than the Pacific, which has the higher ridges near its shores, constituting what some visitors to the Pacific coast of America have not inaptly called the 'back of the world,' while the wider slopes face the narrower ocean, into which, for this reason, the greater part of the drainage of the land is poured.² The Pacific and Atlantic, though both depressions or flattenings of the earth, are, as we shall find, different in age, character, and conditions; and the Atlantic, though the smaller, is the older, and, from the geological point of view, in some respects, the more important of the two.

If our imaginary observer had the means of knowing anything of the rock formations of the continents, he would notice that those bounding the North Atlantic are, in general, of great age—some belonging to the Laurentian system.

¹ Dana, *Manual of Geology*, introductory part. Green, *Vestiges of a Molten Globe*, has summed up these facts.

² Mr. Mellard Reade, in two Presidential addresses before the Geological Society of Liverpool, has illustrated this point and its geological consequences.