

surface as far as the Indian Isles, the Philippines, and China. (3) The *Hyperborean Ocean* (*Oceanus Hyperboræus*), the north ocean stretching around the Arctic lands. (4) *Oceanus Australis* surrounding the Austral continent, of which the Indian Ocean is only a part. Other geographers, adds Varenus, divide the ocean into four parts, and adopt the following subdivisions:—(1) The Atlantic, to the north of the equator; (2) the Aethiopian Ocean, to the south of the equator; (3) the Pacific Ocean; and (4) the Indian Ocean. But he does not seem to attach great importance to this nomenclature; he says:—"Res non est magni momenti; sequatur quilibet quod ipsi optimum videtur. Magis enim a nostra fictione quam a natura dependet hæc divisio." It is important to note that this is the first time we find the Atlantic subdivided into two parts, as practised in our day. According to Krümmel, Guillaume Delisle adopted the following designations:—(1) The *North Sea* for the whole of the Atlantic with the name generally written north of the equator, although in certain maps it appears south of the equator; (2) the *Indian Ocean*; (3) the *South Sea*, occasionally called the *South Sea or Pacific*, sometimes the *Great South Sea*, but these names always apply to the whole Pacific.

ISOBATHIC CURVES
—BUACHE.

The first attempt to represent the bottom of the sea by isobathic curves is to be found in a map by Philippe Buache in 1737. These isobathic curves are intended to show that certain elevations of the sea-bottom correspond with the orography of the neighbouring land. In his *Essay on Physical Geography*,¹ published in 1752, he develops these ideas, which may be summarised as follows:—

After the deluge the summits of the highest mountains formed a small number of islands; the waters falling, other islands of less altitude soon appeared, but still separated from the first. The waters continuing to recede, the higher ridges uniting these islands began to show themselves, then the table-lands formed by masses of mountains became visible, and finally the lower plains appeared. Had the water still continued to recede other lands would have appeared in succession, and the bottom of the sea would be a vast valley; it might then have been seen how the basins of the sea are diversified, and how the continents are united by submarine chains now hidden from view by the waters covering them. The directions of certain chains of islands, of rocks, of shallows, which cross the sea, seem to unite the chains of terrestrial mountains. The soundings of navigators, the observations on the currents and their directions, are almost incontestible proofs that the bottom of the sea differs from the land only in that it happens to be below the line at which the waters ceased to recede.

¹ Buache, *Essai de géographie physique, où l'on propose des vues générales sur l'espace de charpente du globe, composée des chaînes de montagnes qui traversent les mers comme les terres; avec quelques considérations particulières sur les différents bassins de la mer et sur sa configuration intérieure* (*Hist. de l'Acad. des Sciences*, 1752, pp. 399 et seq.).