

This arrangement of the bottom of the sea is the subject of Buache's work, and he arrives at the following conclusions:—The globe is sustained by several chains of mountains, which cross the sea as well as the land, and serve probably to increase the solidity of the globe; the chains of mountains are the framework of the globe, repeating an idea already expressed by Father Athanasius Kircher, who considered these chains as the “squeletæ ossatura globi.” These mountains divide the sea into different basins, which appear to be united merely because the mountains enclosing them are, for the most part, covered with water.

CONTOURS OF SEA  
BOTTOM  
COMPARED WITH  
THOSE OF DRY  
LAND.

The marine valleys are not all equally deep. If the water of the channel separating France from England were withdrawn, a ridge of mountains uniting Dover and Calais would be left uncovered. Were the sea to subside still further, the Scilly Isles and the Isle of Wight would become mountains separated from England by valleys left dry. Were the waters to fall 60 fathoms, England itself would become a huge mountain separated by a valley from Normandy, and the bottom of the channel at its opening, which would then extend from the Isle of Ushant to the Scilly Isles, would become the sea border. Supported by these examples, drawn from a part of the ocean which he had carefully studied, Buache concludes that islands are but the summits of the highest mountains, and that they are frequently united by other mountains of less altitude, the existence of which has been proved by the sounding-lead. These submarine chains, according to the author, determine the division of the seas, and they are almost invariably the continuation of those we find on land.

Buache distinguishes three great seas. He calls the Atlantic *the Ocean*, and retains the appellation *Indian Sea* with the meaning attached to it by his predecessors; he calls the Pacific Ocean the *Great Sea*; lastly, he mentions two small frozen seas in the north and south. He divides the three great oceans by means of his submarine mountains into subordinate basins; thus *the Ocean* (the Atlantic) includes a sea of the *North of the Ocean*, a sea of the *North-West*, and an *Atlantic Sea of the Ocean*. The Gulf of Mexico is an annex in the west, as the Mediterranean and Baltic are in the east. All these subdivisions refer to what we now call the North Atlantic. He did not subdivide the South Atlantic, but gives the whole of that part of the Atlantic the name of *Southern Ocean of the Ocean*.

The *Indian Sea* comprises the *Gulf of Arabia*, embracing the Red Sea and the Persian and Arabian Gulfs, the *Gulf of Bengal*, and the *Archipelago of India*, limited in the west by the submarine chain uniting the coast mountains of Burmah with the north-west cape of Sumatra, to which belong as a ridge-line the Andaman and Nicobar Islands.

He subdivides the *Great Ocean* into *Northern Sea of the Great Ocean*, *South Sea* between the two tropics, and *Southern Sea of the Great Ocean*. These subdivisions, as shown by Buache's map, rest on his supposed submarine chains. This nomenclature