

*ADDITIONS and Corrections to the Article,  
Of Inequalities at the Bottom of the Sea, and  
of Currents, vol. i. p. 351.*

## I.

*Of the Nature and Quality of the Soil at the Bottom  
of the Sea, p. 357.*

**M.** L'Abbé Diequemare, a learned natural philosopher, has made some observations on this subject, which seem to accord with what I have advanced in my Theory of the Earth.

Conversations with pilots of all languages, the perusal of charts and soundings both ancient and modern, the examination of such bodies as attach themselves to the plummet, the inspection of coasts, banks, and of the strata which compose the interior parts of the earth, to a depth nearly equal to the length of our common plumb-lines, some reflections which are most analogous to this subject arising from physics, cosmography, and natural history, have made me suspect, nay, have even convinced me, says M. l'Abbé Diequemare, ' that, in some  
' places,

' places, there must be two different bottoms,  
' the one often covering the other at intervals:  
' The ancient and permanent, which may be  
' called the general bottom, and the other acci-  
' dental or particular. The first, which ought to  
' form the basis of a general picture, is the soil  
' of the basin that contains the sea. It is com-  
' posed of the same strata which we every  
' where find in the bowels of the earth, such as  
' marl, stone, clay, sand, shells, all disposed ho-  
' rizontally, and of an equal thickness through-  
' out a great extent. . . Here, we find a bottom  
' of marl; there, a bottom of clay, sand, or rock.  
' Lastly, the number of general bottoms disco-  
' verable by sounding exceeds not six or seven  
' species. The most extensive and thickest of  
' these strata, being uncovered, or cut perpendi-  
' cularly, form great spaces in the sea, where  
' we ought to recognise the general bottom, in-  
' dependent of such foreign substances as may  
' be deposited by currents or other causes.  
' There are other permanent bottoms which  
' we have not hitherto mentioned: These are  
' those immense masses of madrepores and  
' corals, which often cover a bottom of rock,  
' and those enormous and extended banks of  
' shells, which a rapid multiplication, or other  
' causes, have accumulated, and which occur in  
' different places, as it were in colonies. One  
' species occupies a certain extent; the succeed-  
' ing

'ing space is occupied by another species, in  
'the same manner as has been remarked with  
'regard to fossil shells, in a great part of Europe,  
'and perhaps every where else. It is by ob-  
'servations on the interior parts of earth, and  
'on such places as the sea leaves uncovered,  
'where we always see particular species reign-  
'ing over certain districts, that we have been  
'enabled to form some idea of the prodigious  
'number of individuals, and of the thickness  
'of the banks at the bottom of the sea, of which  
'we can only know the surface by our sound-  
'ings.

'The accidental or particular bottom is  
'composed of immense numbers of the prick-  
'les of the sea-urchin; of fragments of shells,  
'sometimes corrupted; of crustaceous animals;  
'of madrepores; of sea-plants; of pyrites; of  
'granites rounded by friction; of pieces of mo-  
'ther-of-pearl; of mica; perhaps of talc, to  
'which different names are given according  
'to their appearances; of entire shells, but  
'in small quantity, and seemingly dispersed  
'through no great extent; of small flints, some  
'crystals, coloured sands, a light slime, &c.  
'All these bodies, disseminated by the currents,  
'the agitation of the waters, and partly proceed-  
'ing from the rivers, from the sinking of hills or  
'high beaches, and other accidental causes,  
'seldom perfectly cover the general bottom,  
which

'which appears every instant, when we found  
'often in the same regions. . . . I remarked, that,  
'during near a century, a great part of the ge-  
'neral bottoms of the Gulf of Gascony and la  
'Mancha, have suffered little or no change,  
'which supports my opinion concerning the two  
'bottoms \*.

## II.

*Of Currents in the Ocean; vol. i. p. 365.*

TO the enumeration of currents, we shall add  
the famous current of Mosckoe, Mosche, or  
Male, on the coast of Norway, of which a learn-  
ed Swede has given the following description:

'This current, which took its name from the  
'rock of Moschenfiele, situated between the two  
'islands of Tofoe and Woeroen, extends four  
'miles from north to south.

'It is extremely rapid, especially between the  
'rock of Mosche and the point of Lofoe. But,  
'in proportion as it approaches the two isles of  
'Woeroen and Rouest, its rapidity diminishes.  
'It finishes its course from north to south in six  
'hours, and from south to north in an equal  
'time.

\* Journ. de Phys. par M. Abbé Rozier, Dec. 1775, p. 438.

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