

L.+ *Meoma*, T.
 L.++ *Schizaster*, T.
 L.+ *Metalia*, T.
 C.+ *Neolampus*.
 L.++ *Brissopsis*.
 L.++ *Hemiaster*, C.
 L.++ *Echinocardium*, T.
 L.+ *Spatangus*, T.
 L.++ *Maretia*, T.
 L.+ *Echinolampas*, T.
 L.+ *Mellita*, recent.
 L.+ *Peronella*, recent.
 L.+ *Clypeaster*, T.
 L.+ *Echinanthus*, T.
 L.++ *Echinocyamus*, C.
 L.++ *Fibularia*, C.
 L.+ *Toxopneustes*, T.

L.+ *Hipponoë*, T.
 L.++ *Echinus*, C.
 L.+ *Salmacis*, T.
 C.+ *Temnechinus*, C.
 L.+ *Temnopleurus*, T.
 L.+ *Sphærechinus*.
 L.+ *Echinometra*, T.
 C.+ *Phormosoma* (Echinothuri-
 dæ, C.).
 C.+ *Micropyga*.
 C.+ *Cælopleurus*, T. (*Magnosia*,
 C.).
 L.+ *Arbacia*, T.
 C.+ *Salenia*, C.
 L.++ *Goniocidaris*, recent.
 L.+ *Cidaris*, T.
 L.++ *Dorocidaris*, C.

It is interesting to note that all the genera which have the greatest bathymetrical range, which extend from the littoral to the abyssal region, are at the same time genera which date back to the Cretaceous, while those which have a somewhat more limited range date back to the Tertiaries, and those genera which happen to extend only slightly beyond the strictly littoral range date back only to the more recent Tertiary periods. Of course the difficulty of tracing the connection between the species of the present epoch, which may have ranged in the Tertiary, in shallow seas, or in deeper water is very great, and the mixture thus created in the littoral fauna of the present day it is practically impossible to disentangle at present, if we take into account the impossibility of determining what are strictly deep-sea genera at the present day on account of the great bathymetrical range of many genera, and the possibility that what may be to-day a littoral species may have been a deep-water genus in older geological times or *vice versa*.

The extremes of temperature which we find in the sea at different depths characterising the different bathymetrical regions we have recognised are much smaller than the extremes of temperature which characterise our terrestrial fauna and flora. We have no such extremes as are distinguished on land between a tropical and an arctic fauna or between a fauna in the tropics near the level of the sea and one near the lower limit of perpetual snow. Yet in the one case the difference in pressure of the surrounding medium is small, say at the outside there is not a greater difference than two-thirds, while between the abyssal regions and the littoral regions we have no such extreme of temperatures, but extremes of pressure represented by a ratio of one to three hundred