

It will be seen that the more ancient corals have what is called a quadripartite arrangement of the stony plates or *lamellæ*,—parts of the skeleton which support the organs of reproduction. The number of these lamellæ in the paleozoic type is 4, 8, 16, &c.; while in the newer type the number is always 6, 12, 24, or some other multiple of six; and this holds good, whether they be simple cup-like forms, as in figs. 514 *a* and 515 *a*, or aggregate clusters of cups as in 514 *c*.

It is not enough, therefore, to say that the primary or more ancient corals are all generically and specifically dissimilar from the secondary, tertiary, and living corals,—for, more than this, they belong to distinct Orders, although often so like in outward form as to have been referred in many cases to living reef-building genera. Hence we must not too confidently draw conclusions from the modern to the paleozoic polyps, respecting climate and the temperature of the waters of the primeval seas, inasmuch as the two groups of zoophytes are constructed on essentially different types. When the great number of the paleozoic and neozoic species is taken into account, it is truly wonderful to find how constant the rule above explained holds good; only one exception having as yet occurred of a quadripartite coral in a neozoic formation (the cretaceous), and one only of the sextuple class (a *Fungia*?) in paleozoic (Silurian) rocks.

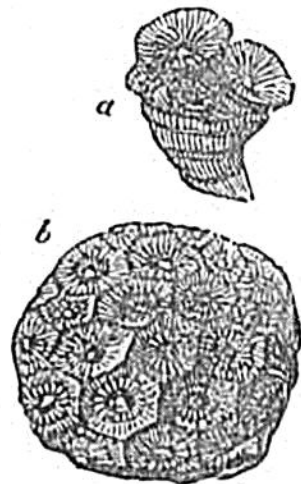
From a great number of lamelliferous corals met with in the Mountain Limestone, two species have been selected, as having a very wide range, extending from the eastern borders of Russia to the British Isles, and being found almost everywhere in each country.

Fig. 516.



*Lithostrotion basaltiforme*, Phill. sp. (*Lithostrotion striatum*, Fleming; *Astræa basaltiformis*, Conyb. and Phill.) Kendal; Ireland; Russia; Iowa, and westward of the Mississippi, United States. (D. D. Owen.)

Fig. 517.



*Lonsdaleia floriformis* (Martin, sp.) M. Edwards. (*Lithostrotion floriforme*, Fleming. *Strombodes*.)  
*a.* Young specimen, with buds on the disk.  
*b.* Part of a full-grown compound mass. Bristol, &c.; Russia.

These fossils, together with numerous species of *Zaphrentis*, *Amplexus*, *Cyathophyllum*, *Clisiophyllum*, *Syringopora*, and *Michelinea*,\* form a group widely different from any that preceded or followed them.

\* For figures of these corals, see Palaeontographical Society's Monographs, 1852.