

briefly defines, and then proceeds to divide the vegetation of the earth into "kingdoms, regions, provinces, zones, and districts." To give the whole of his subdivisions would occupy more space than can be afforded, and carry us beyond what is necessary in this discussion. His primary divisions are four, corresponding to his four Tertiary elements. These are:—the northern extratropical floral kingdom, the palæotropical floral kingdom, the South-American floral kingdom, and the old oceanic floral kingdom. In conformity with English usage we will call his primary divisions regions and the secondary ones subregions; and where we have occasion to refer to the smaller divisions, the names given above will be employed. Engler's secondary divisions are as follows:—

1. NORTHERN EXTRATROPICAL REGION.

SUBREGIONS: 1. Arctic; 2. Subarctic or Conifer; 3. Central Asiatic; 4. Mediterranean; 5. Mandshurian and Japanese; 6. North-American Pacific; 7. North-American Atlantic.

2. PALÆOTROPIC REGION.

SUBREGIONS: 1. West-African forest; 2. African and Arabian desert; 3. Malagassy; 4. Western Indian; 5. Tropical Himalayan; 6. East-Asiatic; 7. Malayan; 8. Araucaria; 9. Polynesian; 10. Sandwich Island.

3. SOUTH-AMERICAN REGION.

SUBREGIONS: 1. Mexican Highlands; 2. Tropical American; 3. Andine; 4. Galapagos; 5. Juan Fernandez.

4. OLD OCEANIC REGION.

SUBREGIONS: 1. Antarctic forest of South America; 2. New-Zealand; 3. Australian; 4. Kerguelen; 5. Amsterdam Island; 6. Cape; 7. Tristan d'Acunha; 8. St. Helena.

The ternary subdivisions or provinces of the Northern Extratropical Region of the above scheme are about forty; many of them are divided into several zones, and some of them again into numerous districts. Subdivision is, for obvious reasons, not carried so far in the three other regions.

I have already put on record* my objections to that part of Dr. Engler's scheme relating to oceanic islands and the "antarctic" Flora; but I have now to deal with it as a whole. Theoretically there may be much to justify his regions; yet it seems to me that any attempt at division based partly upon assumed, or even proved, anterior conditions, and partly on present conditions, is unsatisfactory and confusing. On this point Wallace says†:—"Our object is to represent as nearly as possible the

* Botany of the 'Challenger' Expedition, i. Introduction, p. 50.

† The Geographical Distribution of Animals, i. p. 55.