

tive standing in their respective classes, and to the order of their succession in past geological ages, and more indirectly, also, to their embryonic growth.

Almost every class has its tropical families, and these stand generally highest in their respective classes; or, when the contrary is the case, when they stand evidently upon a lower level, there is some prominent relation between them and the prevailing types of past ages. The class of Mammalia affords striking examples of these two kinds of connection. In the first place, the Quadrumana, which, next to Man, stand highest in their class, are all tropical animals; and it is worthy of remark, that the two highest types of Anthropoid Monkeys, the Orangs of Asia and the Chimpanzees of Western Africa bear, in the coloration of their skin, an additional similarity to the races of Man inhabiting the same regions, the Orangs being yellowish red, as the Malays, and the Chimpanzee blackish, as the Negroes. The Pachyderms, on the contrary, stand low in their class, though chiefly tropical; but they constitute a group of animals prominent among the earliest representatives of that class in past ages. Among Chiroptera, the larger frugivorous representatives are essentially tropical; the more omnivorous, on the contrary, occur everywhere. Among Carnivora, the largest, most powerful, and also highest types, the Digitigrade, prevail in the tropics, while among the Plantigrades, the most powerful, the Bears, belong to the temperate and to the arctic zone, and the lowest, the Pinnate, are marine species of the temperate and arctic seas. Among Ruminants, we find the Giraffe and the Camels in the warmer zones, the others everywhere. In the class of Birds the gradation is not so obvious as in other classes, and yet the aquatic types form by far the largest representation of this class in temperate and cold regions, and are almost the only ones found in the arctic, while the higher land birds prevail in the warm regions. Among Reptiles, the Crocodilians are entirely tropical; the largest land Turtles are also only found in the tropics, and the aquatic representatives of this order, which are evidently inferior to their land kindred, extend much further north. The Rattlesnakes and Vipers extend further north and higher up the mountains than the Boas and the common harmless snakes. The same is true of Salamanders and Tritons. The Sharks and Skates are most diversified in the tropics. It is also within the tropics that the most brilliant diurnal Lepidoptera are found, and this is the highest order of Insects. Among Crustacea the highest order, the Brachyura, are most numerous in the torrid zone; but Dana has shown, what was not at all expected, that they nevertheless reach their highest perfection in the middle temperate regions.<sup>1</sup> The Anomoura and Macroura, on the contrary, are nearly equally divided between the torrid and temperate zones; while the lower Tetracapods are far more numerous in extra tropical latitudes than in the tropical. The

<sup>1</sup> DANA, Crustacea, p. 1501.