

and even the parts of the flower—sepals, petals, stamens, and carpels, are in reality all leaves or appendages more or less modified for diverse work. The mouth-parts of a lobster are masticating legs, and a bird's wing is a modified arm. The old naturalists were so far right in insisting on the fact of a few great types. Nature, Lamarck said, is never brusque; nor is she inventive so much as adaptive.

4. **Wealth of Numbers.**—Large numbers are so unthinkable, and accuracy in census-taking is so difficult, that we need say little as to the number of different animals. The census includes far over a million living species—a total so vast that, so far as our power of realising it is concerned, it is hardly affected when we admit that more than half are insects. To these recorded myriads, moreover, many newly-discovered forms are added every year—now by the individual workers who with fresh eye or improved microscope find in wayside pond or shore pool some new thing, or again by great enterprises like the *Challenger* expedition. Exploring naturalists like Wallace and Semper return from tropical countries enriched with new animals from the dense forests or warm seas. Zoological Stations, notably that of Naples, are “register-houses” for the fauna of the neighbouring sea, not merely as to number and form, but in many cases taking account of life and history as well. Nor can we forget the stupendous roll of the extinct, to which the zoological historians continue to add as they disentomb primitive mammals, toothed birds, giant reptiles, huge amphibians, armoured fishes, gigantic cuttles, and a vast multitude of strange forms, the like of which no longer live. The length of the *Zoological Record*, in which the literature and discoveries of each year are chronicled, the portentous size of a volume which professes to discuss with some completeness even a single sub-class, the number of special departments into which the science of zoology is divided, suggest the vast wealth of numbers at first sight so bewildering. More than two thousand years ago Aristotle recorded a total of about 500 forms, but more new species may be described in a single volume of the *Challenger* Reports. We speak about the number of the stars, yet more than one