

Holland 15,000, in Africa 10,000, and in America, 18,000, we have 80,000 species ; and if 7000 be the number of published cryptogamous plants, and we allow 3000 for the undiscovered species (making 10,000), there would then be, on the whole, 90,000 species." But since that period one catalogue, as I learn from Dr. J. Hooker, contains a list of the names of 78,000 phænogamous plants which had been published before 1841.

It was supposed by Linnaeus that there were four or five species of insects in the world for each phænogamous plant : but if we may judge from the relative proportion of the two classes in Great Britain, the number of insects must be still greater ; for the total number of British insects, "according to the last census," is about 12,500* ; whereas there are only 1500 phænogamous plants indigenous to our island. As the insects are much more numerous in hot countries than in our temperate latitudes, it seems difficult to avoid the conclusion that there are more than half a million species in the world.

The number of known mammifers, when Temminck wrote, exceeded 800, and Mr. Waterhouse informs me that more than 1200 are now (1850) ascertained to exist. Baron Cuvier estimated the amount of known fishes at 6000 ; and Mr. G. Gray, in his "Genera of Birds," enumerates 8000 species. We have still to add the reptiles, and all the invertebrated animals, exclusive of insects. It remains, in a great degree, mere matter of conjecture what proportion the aquatic tribes may bear to the denizens of the land ; but the habitable surface beneath the waters can hardly be estimated at less than double that of the continents and islands, even admitting that a very considerable area is destitute of life, in consequence of great depth, cold, darkness, and other circumstances. In the late polar expedition it was found that, in some regions, as in Baffin's Bay, there were marine animals inhabiting the bottom at great depths, where the temperature of the water was below the freezing point. That there is life at much greater profundities in warmer regions may be confidently inferred.

The ocean teems with life—the class of *Polyyps* alone are conjectured by Lamarck to be as strong in individuals as insects. Every tropical reef is described as covered with Corals and Sponges, and swarming with Crustacea, Echini, and Testacea ; while almost every tide-washed rock in the world is carpeted with Fuci, and supports some Corallines, Actiniæ, and Mollusca. There are innumerable forms in the seas of the warmer zones, which have scarcely begun to attract the attention of the naturalist ; and there are parasitic animals without number, three or four of which are sometimes appropriated to one genus, as to the whale (*Balæna*), for example. Even though we concede, therefore, that the geographical range of marine species is more extensive in general than that of the terrestrial (the temperature of the sea being more uniform, and the land impeding less the migra-

* See Catalogue of Brit. Insects, by John Curtis, Esq.