

Transcription (from *Trove*), July 2014:

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[p. 5a]

‘New Books.’

“The Geographical Distribution of Animals,” by Alfred Russel Wallace, confirms in a singular manner, and by evidence of the most exact and painstaking nature, Mr. Darwin’s theory of the doctrine of evolution, at which, indeed, Mr. Wallace had arrived by independent thought so nearly at the same time that each gives to the other the honour of the discovery. Great truths are like great cities—they may be reached by many widely-differing tracks. The sciences of zoology, botany, and geology have been pursued by different explorers with different methods. So long as they dealt only with the collection and classification of existing facts they appeared utterly unconnected. But modern science is not content with the investigation of the present only. The great questions “Whence and whither” have entered into all minds, and in some form or other are influencing the direction of all human thought and enquiry. The moment we begin to investigate the history of plants, of animals, and of the earth, the connection of the sciences becomes apparent. Animals must follow the plants upon which they feed, and a gradual change of elevation in the land or encroachment of the sea by changing the climate will cause a slow but sure migration of both plants and animals, or an isolation which may alter all their conditions of life. Thus, the three sciences of geology, botany, and zoology are seen to interpret one another, and when we find all leading towards the same inference we can hardly doubt that it is truth. By a comparison of the living and extinct fauna and flora of different countries, Mr. Wallace has arrived at the conclusion that the higher forms of life have all appeared first in the northern hemisphere, which has sent out migration after migration to colonize the southern continents. Fossil remains of marsupial animals similar to the kangaroo and wallaby are found imbedded in the rocks of Iceland; and the elephant and rhinoceros, which now inhabit the South of Africa, once roamed the forests of Britain. “Animals,” says Mr. Wallace, “multiply so rapidly that we may consider them as continually trying to extend their range; and thus any land raised above the sea by geological causes becomes immediately peopled by a crowd of competing inhabitants, the strongest and best adapted of which alone succeed in maintaining their position.” The glacial epoch, which occurred not less than fifty or a hundred thousand years ago, may have directed them southwards, and changes in the surface of the earth prevented their return. High mountains and deep seas form insuperable barriers, and wherever these intervene the species are found remarkably distinct. The comparatively small island of Madagascar has a fauna and flora peculiar to itself, and of a very ancient type. It was probably separated from Africa at a remote period, and its plants and animals have been thus left to develop in isolation. In Madeira and Kerguelen’s Land many insects which have wings in Europe are found to be without them, while the wings of those which retain them are singularly large and powerful. These islands are exposed to fearful storms, and it is evident that the insects must either be strong enough to struggle victoriously with the wind or give up the struggle altogether. In the one case those with weak wings have been driven out to sea and perished, only the wingless abortions being left to propagate the species. In the other those with stronger wings being preserved have continually developed in size and power, and thus become adapted to their habitation. Mr. Wallace gives many instances of similar changes, and shows how the distribution and habits of plants and animals elucidate the geographical alterations of the surface of the earth. His book is illustrated with maps so drawn and

coloured as to show the physical differences of countries, such as height, strata, and temperature. It is written for the scientific rather than the general reader, and requires a considerable amount of knowledge of natural history and geology to follow the reasoning of the author.

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*The Alfred Russel Wallace Page*, Charles H. Smith, 2014.