

RECENT LITERATURE.

WALLACE'S TROPICAL NATURE.¹—The gifted author's long residence in the tropical regions of the old and new world, and his large way of looking at nature, induced by extensive travel and acute observation in both hemispheres, have enabled him to produce a book, which, for the breadth of its views, and interest of its style, must claim a place among those few works in existence of which Humboldt's *Views of Nature* is a type. Wallace's general views, however, of tropical life and nature while fresh, and based on manifold and novel facts, will not perhaps be considered as particularly original to those who have read Humboldt's narratives and essays. Our author accounts for the great richness and variety of the plants and animals of the tropics by the uniformity of the equatorial climate in all parts of the globe. "Over a large portion of the tropics," he writes, "the same general features prevail, only modified by varying local conditions, whether we are at Singapore or Batavia, in the Moluccas, or New Guinea,

¹ *Tropical Nature and other Essays*. By ALFRED R. WALLACE. London, MacMillan & Co., 1878. 8vo. pp. 356.

at Para, at the sources of the Rio Negro or on the Upper Amazon, the equatorial climate is essentially the same, and we have no reason to believe that it materially differs in Guinea or the Congo." On the other hand the glacial period disturbed the uniformity of the temperate zone and caused a partial extinction of life. Where there are departures from the typical equatorial climate, as in rainless and desert tracts, this seems probably due to the nature of the soil or the artificial clearing away of the forests, and he cites the case of Central India where "the scanty and intermittent rainfall, with its fearful accompaniment of famine, is no doubt in great part due to the absence of a sufficient proportion of forest-covering to the earth's surface." He then calls attention to the fact that "with but few and unimportant exceptions a great forest band from a thousand to fifteen hundred miles in width girdles the earth at the equator, clothing hill, plain, and mountain with an evergreen mantle. Lofty peaks and precipitous ridges are sometimes bare, but often the woody covering continues to a height of eight or ten thousand feet, as in some of the volcanic mountains of Java, and on portions of the Eastern Andes." This forest belt merges into woody and then open country, soon changing into arid plains or even into deserts, where the great equatorial currents of air laden with moisture do not penetrate.

The primeval forests of the equatorial zone are distinguished from the forests of the temperate zones by their vastness, "and by the display of a force of development and vigor of growth rarely or never witnessed in temperate climates." There is also a great variety of specific forms, while the individuals are less numerous, this being the reverse of what is to be seen in the Temperate and Arctic Zones.

Animal life is likewise more abundant and varied specifically, many groups, as butterflies, parrots, humming birds, apes and monkeys, lizards, frogs and snakes being pre-eminently tropical, and in the tropics, "evolution has had a fair chance" while in the Temperate Zone, with its glacial periods, "it has had countless difficulties thrown in its way. The equatorial regions are then, as regards their past and present life history, a more ancient world than that represented by the Temperate Zones, a world in which the laws which have governed the progressive development of life have operated with comparatively little check for countless ages, and have resulted in those infinitely varied and beautiful forms—those wonderful eccentricities of structure, of function, and of instinct—that rich variety of color, and that nicely balanced harmony of relations, which delight and astonish us in the animal productions of all tropical countries."

While the chapters on tropical life occupy the first half of the book, the second half is devoted to essays on the color of animals and plants, and the origin of color-sense; on some relations

of living things to their environment; on the rise and progress of modern views as to the antiquity and origin of man, and on the distribution of animals as indicating geographical changes. These essays, though on recondite subjects, are of great general interest, and presented in the attractive style characteristic of the author's other popular works and essays.