A LECTURE ON THE GEOGRAPHY OF PLANTS

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A Lecture on the Geography of Plants by John Barton

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BY JOHN BARTON.

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1827.

THE outlines of the following Lecture were delivered before the members of the Mechanics' Institute at Chichester. It was illustrated by reference to maps, and, indeed, would be scarcely intelligible without such reference; I have therefore added some maps of the principal divisions of the world, in which the names of plants are substituted for the names of places. Cultivated plants are distinguished by Roman letters, those growing wild by Italics. It must not be supposed, however, that these plants grow exclusively in the very spot where their names are marked; the greater number of those native to the south of Europe, for instance, are found alike in Spain, Italy, and Turkey. I have, notwithstanding. endeavoured to place each name in a situation as accurately specific as the nature of the subject admits; thus, Wheat, Barley, and Oats, might be inserted indiscriminately as cultivated in any part of England; but I have placed Oats in Lincolnshire, Barley in Norfolk, Wheat in Suffolk and Essex, because the soil in each of these counties is better adapted to the sort there inserted than to other kinds of Grain.

Stoughton, June 11th, 1827.

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THE Geography of Plants has much engaged the attention of naturalists of late years, particularly those of the continent; and a great number of valuable observations have been collected by their united researches. It is a subject which appears well calculated to interest every one who has a taste for the study of nature; but while wrapped up in the technical terms of botany, as well as in a foreign or dead language, the number is comparatively small of persons who are qualified to participate in the pleasure which it is capable of affording. I shall for the most part confine my attention to those plants whose names, or the names of some of their productions, are likely to be known to every one; either the plants themselves being cultivated in our gardens, or their productions employed by the apothecary, the dyer, or the cabinet-maker.

Scarcely fourteen hundred species of plants appear to have been known and described by the Greeks, Romans, and Arabians. At present, more than three thousand species are enumerated as natives of our own island; and the researches of botanists in other parts of the world, have extended our knowledge of the vegetable kingdom to more than forty thousand species*. Of this vast number, comparatively few belong indiscriminately to all climates and situations; none, perhaps, excepting some mosses and other obscure plants, which appear to require for their existence only an abundance of shade and moisture t. This limitation of particular plants to certain latitudes, is undoubtedly connected with certain peculiarities in their internal structure; though, for the most part, we are unable to discover in what those peculiarities consist. Independently, bowever, of the restriction thus imposed by the climate of every place on the nature of its vegetable productions,

^{*} Humboldt, de Distributione Geographica Plantarum, secundum cœli temperiem et altitudinem montium Prolegomena, p. 21.

⁺ Humboldt, Ideen zu einer Geographie der Pflanzen, p. 11.

each of the great divisions of the earth appears to have given birth to a set of plants distinct from those of other parts. Thus, a large proportion of the trees and plants growing wild in the western hemisphere are unlike those of the eastern hemisphere in the same latitude. The vegetable productions of the Cape of Good Hope are unlike those of the south of Europe, though the climate in these two situations is little dissimilar. The plants of the East Indian islands form another distinct class; those of China and Japan another; those of New Holland again another. We are even assured that the little island of St. Helena contains a set of plants peculiar to itself, not one of which is to be found on the neighbouring western shore of the continent of Africa*. The plants originally belonging to one part of the world, when removed to another enjoying a similar climate, often appear to flourish as well as in their native soil. Thus the Potatoe, a native of South America, which was brought to England by Sir Walter Raleigh in the reign of queen Elizabeth, grows as well here as the Turnip, the Carrot, or the Cabbage, which are natives of

Brown: Appendix to Tuckey's Narrative of an Expedition to the Congo River, p. 475.

Great Britain. In like manner do the Sugarcane and the Coffee-tree flourish in the West Indies, though not originally produced there, but transplanted—the Sugar-cane from China, the Coffee-tree from Arabia.

It will be convenient to begin our survey of the vegetable kingdom from the colder regions of the earth, and to proceed gradually towards Beyond the Arctic Circle, the the warmer. number of plants is extremely limited. Captain Ross, speaking of a tribe of Esquimaux that he met with on the shores of Baffin's Bay, says: "Their knowledge of wood seemed to be limited to some Heath of a dwarfish growth, with stems no thicker than the finger." Accordingly, they knew not what to think of the timber they saw on board the ship; and so little notion had they of cloth, or any kind of vegetable texture, that, when presented with a shirt, they inquired of what apimal's skin it was made. On the shores of Hudson's Bay, it is said that no trees are found north of latitude 60°. In Europe, however, vegetation extends considerably further. A great part of Sweden, Norway, and the north of Russia, is covered with forests of Fir; and from these countries we derive our

A plant having some resemblance to Heath, I presume; not a true Erica.

best deal timber. The yellow deal, which is most valued, is the wood of the Silver Fir ; white deal of the Spruce Firt. The Scotch Fir t (the only species of the Fir tribe a native of Great Britain) yields turpentine, pitch, tar, and rosin. Turpentine flows naturally from the trunk of the tree, as gum does from the Plum-tree; but the process is accelerated by cutting a hole in the wood near the ground, and collecting the turpentine beneath. When turpentine is distilled with water, the oil of turpentine comes over, and a substance is left behind well known by the name of rosin. Tar is procured by heating billets of the wood in a sort of rude oven: the tar sweats out, and is collected in a reservoir below. Tar is converted into pitch, by boiling till it acquires a thicker consistence.

In no part of the world has the distribution of plants been more carefully observed than in Norway and Lapland. The trees which are there found to approach nearest the limit of perpetual snow are the Dwarf Birch \(\) and Dwarf Willow \(\), if they can be properly denominated trees; the Dwarf Birch seldom exceeding two or three feet in height, and the

Pinus Picea. † Pinus Abies. ‡ Pinus sylvestris.
§ Betula nana. | Salix berbacea.