

**PART I. CHRONOLOGICAL OBSERVATIONS
ON INTRODUCED ANIMALS AND PLANTS.
UNITED STATES EXPLORING EXPEDITION
DURING THE YEARS 1838, 1839, 1840, 1841,
1842. VOL. XV. THE GEOGRAPHICAL
DISTRIBUTION OF ANIMALS AND PLANTS**

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CHARLES PICKERING

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PART I.

CHRONOLOGICAL OBSERVATIONS

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UNITED STATES
EXPLORING EXPEDITION.

DURING THE YEARS

1838, 1839, 1840, 1841, 1842.

UNDER THE COMMAND OF

CHARLES WILKES, U. S. N.

VOL. XV.

THE
GEOGRAPHICAL DISTRIBUTION
OF
ANIMALS AND PLANTS.

BY

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MEMBER OF THE SCIENTIFIC CORPS ATTACHED TO THE EXPEDITION.

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GEOGRAPHICAL DISTRIBUTION
OF
ANIMALS AND PLANTS.

CHAPTER I.

ANIMALS AND PLANTS REMOVED FROM THEIR NATIVE LOCALITIES
BY THE HAND OF MAN.

IN taking up the subject of the Geographical Distribution of species, it will at once be perceived, that human interference must be taken into consideration; the face of nature having been greatly changed by the removal of the forest, the cultivation of the soil, and the introduction and dissemination of foreign animals and plants.

Detached observations, tending to show the amount of this interference, are given in the twenty-first and succeeding chapters of my Races of Man. To extend similar observations to all the countries of the globe, seems an endless task; and it becomes necessary, with the accumulation of facts, that some general plan should be adopted in arranging the results.

On reflection, the subject of the introduction of foreign animals and plants, will be found to resolve itself into tracing out the history of each species. A list will, therefore, naturally assume the chronological order: and Egypt, from its containing the earliest records of the human family, and from its geographical position and other collateral circumstances, becomes the most convenient country for a point of reference.

In the following pages, the species unknown in Egypt are inserted in notes. The chronological order is thus preserved, while the remarks are rendered capable of indefinite extension. This permits other countries to be included; and the plants and animals introduced by Polynesians and aboriginal Americans along the isles and shores of the Pacific, to be brought under investigation in connexion with their native names.

The observations embraced in this and the preliminary chapters, are to be regarded as an introduction to the volume on Geographical Distribution prepared during the voyage of the Expedition. The ground must first be cleared of sources of error, before we can arrive at a view of the real order of Nature.

I. THE NATURAL CONDITION OF EGYPT.

To a stranger accustomed to lands clothed with vegetation, Egypt presents a most uninviting aspect. An upland waste of bare light-coloured soil, save only upon the bottom of the narrow trench formed by the river and within reach of its overflow. After leaving the vicinity of the Mediterranean, this interminable waste appears on a general view to be entirely devoid of vegetation: but plants can be found by searching for them; and these Desert plants, of less than a hundred kinds, and in general not remarkable in their appearance, constitute all that is Botanically interesting in the flora of Egypt.

In striking contrast with the Desert, the bottom of the river-valley, or the river-flats, have been always thickly covered with grasses and other herbaceous and humble plants. Traces of the original growth may still be distinguished: the species being few, and of European affinity; and notwithstanding the warm latitudes, Tropical forms, even in the Thebaid, are rare and inconspicuous.

In these two phases of Egyptian vegetation, the only tree appears to have been a willow (*Salix*), growing sparingly along the river-brink; and perhaps the only shrubs, an occasional tamarisk, and a low bushy *Acacia*, both belonging to the Desert.

On closer examination, the powdery soil is found to be devoid of *Mosses*, *Ferns*, and *Lichens* (the exceptions being, two or three *Mosses* in the walls of cisterns, the *Adiantum capillus veneris* along the Mediterranean, and a few *Lichens* in elevated situations, chiefly on the tops of the Pyramids): other tribes abounding in Europe are also

absent, as the *Saxifragaceæ*, the *Droseraceæ*, the *Primulaceæ*, the *Violaceæ*, the *Valerianaceæ*, the *Gentianaceæ* (the genus *Erythræa* being excepted), the *Orchidaceæ*, perhaps the genus *Carex*, the *Onagraceæ*, the *Hypericaceæ*, the *Globulariaceæ* (a species along the Mediterranean being excepted), the *Crassulaceæ*, the *Dipsacaceæ* (a *Scabiosa* along the Mediterranean being excepted), the heaths and whole tribe of the *Ericaceæ*, and the *Rosaceæ* (with the exception of a *Poterium*, growing near the Mediterranean in the Desert).

The Egyptian flora will be found to be extremely simple. *Zygophyllaceæ* (so peculiarly a Desert tribe) are rather numerous, as also *Resedaceæ*; but the most prominent feature, is an unusual variety and prevalence of *Salsolaceæ*; and of other plants that resemble them in sensible properties.

The river-flats along the Nile were originally a pastoral tract, in all probability abounding in game. As to species, there appears to have been no local provision; but the river opened a path to Northern climates to various antelopes, to the lion, hyæna, ichneumon, genetle (*Viverra*), chameleon, and even to Tropical birds; and these encountered Asiatic animals advancing southward along the banks. There are, however, a few species of birds and quadrupeds that belong properly to the Desert.

II. THE ANTE-HISTORICAL EGYPTIANS.

When man entered Egypt, and especially when he began to cultivate and irrigate the soil, game by degrees became rare, and some of the larger kinds disappeared from the valley.

The indigenous plants being unsuitable for the purposes of *Agriculture*, this art could not have originated on the banks of the Nile; but, together with the objects of cultivation, came from some foreign and distant land.

In artificial conservatories or greenhouses, plants from the extreme North and others from the Tropics, when subjected to the same amount of warmth and moisture, are often found to flourish side by side. Some analogy may be found in the climate of Egypt. It is favourable for the introduction of plants from every quarter; and the soil having been upturned for ages for agricultural purposes, the existing vegetation of the river-flats consists mainly of weeds.