

the north of Asia as far as the latitudes of Berlin and Hamburg, a fact of which Ehrenberg and myself have spoken in other works.*

The grouping or association of different vegetable species, to which we are accustomed to apply the term *Floras*, do not appear to me, from what I have observed in different portions of the earth's surface, to manifest such a predominance of individual families as to justify us in marking the geographical distinctions between the regions of the Umbellatæ, of the Solidaginæ, of the Labiatæ, or the Scitamineæ. With reference to this subject, my views differ from those of several of my friends, who rank among the most distinguished of the botanists of Germany. The character of the floras of the elevated plateaux of Mexico, New Granada, and Quito, of European Russia, and of Northern Asia, consists, in my opinion, not so much in the relatively larger number of the species presented by one or two natural families, as in the more complicated relations of the coexistence of many families, and in the relative numerical value of their species. The Gramineæ and the Cyperaceæ undoubtedly predominate in meadow lands and steppes, as do Coniferæ, Cupuliferæ, and Betulineæ in our northern woods; but this predominance of certain forms is only apparent, and owing to the aspect imparted by the social plants. The north of Europe, and that portion of Siberia which is situated to the north of the Altai Mountains, have no greater right to the appellation of a region of Gramineæ and Coniferæ than have the boundless llanos between the Orinoco and the mountain chain of Caraccas, or the pine forests of Mexico. It is the coexistence of forms which may partially replace each other, and their relative numbers and association, which give rise either to the general impression of luxuriance and diversity, or of poverty and uniformity in the contemplation of the vegetable world.

In this fragmentary sketch of the phenomena of organization, I have ascended from the simplest cell†—the first manifestation of life—progressively to higher structures. "The

* Ehrenberg, in the *Annales des Sciences Naturelles*, t. xxi., p. 387 412; Humboldt, *Asie Centrale*, t. i., p. 339-342, and t. iii., p. 96-101

† Schleiden, *Ueber die Entwicklungsweise der Pflanzenzellen*, in Müller's *Archiv für Anatomie und Physiologie*, 1838, s. 137-176; also his *Grundzüge der wissenschaftlichen Botanik*, th. i., s. 191, and th. ii., s. 11. Schwann, *Mikroskopische Untersuchungen über die Uebereinstimmung in der Struktur und dem Wachstum der Thiere und Pflanzen*, 1839, s. 45, 220. Compare also, on similar propagation, Joh. Müller, *Physiologie des Menschen*, 1840 th. ii., s. 614.