

Cerro of Meapire; on the [Alpine] limestone of Cumanacoa; between Porto Cabello and the Rio Guayguaza; as well as in the valleys of Aragua; on granite; on the western declivity of the hill formed by Cabo Blanco, on gneiss; and in the peninsula of Araya, on saliferous clay. But this is perhaps merely the effect of apposition.* If we would range the different members of the tertiary series according to the age of their formation, we ought, I believe, to regard the breccia of Cabo Blanco with fragments of primitive rocks, as the most ancient, and make it be succeeded by the arenaceous limestone of the castle of Cumana, without horned silex, yet somewhat analagous to the coarse limestone of Paris, and the fresh-water soil of Victoria. The clayey gypsum, mixed with calcareous breccia with madrepores, cardites, and oysters, which I found between Carthagenia and the Cerro de la Popa, and the equally recent limestones of Guadalupe, and Barbadoes (limestones filled with sea-shells resembling those now existing in the Caribbean Sea) prove that the latest deposited strata of the tertiary formation extend far towards the west and north.

These recent formations, so rich in vestiges of organized bodies, furnish a vast field of observation to those who are familiar with the zoological character of rocks. To examine these vestiges in strata superposed as by steps, one above another, is to study the Fauna of different ages, and to compare them together. The geography of animals marks out limits in space, according to the diversity of climates, which determine the actual state of vegetation on our planet. The geology of organized bodies, on the contrary, is a fragment of the history of nature, taking the word history in its proper acceptation: it describes the inhabitants of the earth according to succession of time. We may study genera and species in museums, but the Fauna of different ages, the predominance of certain shells, the numerical relations which characterize the animal kingdom, and the vegetation of a place or of a period, should be studied in sight of those formations. It has long appeared to me that in the tropics as well as in the temperate zone, the species of univalve shells are much more numerous than bivalves. From

* *An-nicht Auflagerung*, according to the precise language of the geologists of my country.