

declivity of the Cordilleras of the Andes. The rising of this ridge is so inconsiderable compared to the whole continent, that its breadth in the parallel of Cape Saint Roche is 1400 times greater than the average height of the Andes.

We distinguish in the mountainous part of South America, a chain and three groups of mountains, namely, the Cordillera of the Andes, which the geologist may trace without interruption, from Cape Pilaes, in the western part of the Straits of Magellan, to the promontory of Paria, opposite the island of Trinidad; the insulated group of the Sierra Nevada de Santa Marta; the group of the mountains of the Orinoco, or of La Parime; and that of the mountains of Brazil. The Sierra de Santa Marta being nearly in the meridian of the Cordilleras of Peru and New Grenada, the snowy summits descried by navigators in passing the mouth of the Rio Magdalena, are commonly mistaken for the northern extremity of the Andes. I shall soon prove that the colossal group of the Sierra de Santa Marta is almost entirely separate from the mountains of Ocaña and Pamplona, which belong to the eastern Cordillera of New Grenada. The hot plains through which runs the Rio Cesar, and which extend towards the valley of Upar, separate the Sierra Nevada from the Paramo de Cacota, south of Pamplona. The ridge which divides the waters between the gulf of Maracaibo and the Rio Magdalena, is in the plain on the east of the Laguna Zapatoza. If, on the one hand, the Sierra de Santa Marta has been erroneously considered (on account of its eternal snow, and its longitude) to be a continuation of the Cordillera of the Andes, on the other hand, the connexion of that same Cordillera with the coast mountains of the provinces of Cumana and Caracas, has not been recognized. The littoral chain of Venezuela, of which the different ranges form the Montaña de Paria, the isthmus of Araya, the Silla of Caracas, and the gneiss-granite mountains north and south of the lake of Valencia, is joined between Porto Cabello, San Felipe, and Tocuyo, to the Paramos de las Rosas and Niquitao, which form the north-east extremity of the Sierra de Merida, and the eastern Cordillera of the Andes of New Grenada. It is sufficient here to mention this connexion, so important in a geological point of view; for the denominations of Andes and Cor-