

months; and some of them, it was believed, continued to push forth leaves beneath the water. This phenomenon is the more worthy of attention, as the soil of these countries is probably granitic. I doubt the secondary formations of the Llanos being continued southward as far as the valley of Caura.

On the 11th of June we landed on the right bank of the Orinoco at Puerto de los Frailes, at the distance of three leagues above the *Ciudad de la Piedra*, to take altitudes of the sun. The longitude of this point is  $67^{\circ} 26' 20''$ , or  $1^{\circ} 41'$  east of the mouth of the Apure. Farther on, between the towns of La Piedra and Muitaco, or Real Corona, are the Torno and Boca del Infierno, two points formerly dreaded by travellers. The Orinoco suddenly changes its direction; it flows first east, then north-north-west, and then again east. A little above the Caño Marapiche, which opens on the northern bank, a very long island divides the river into two branches. We passed on the south of this island without difficulty; northward, a chain of small rocks, half covered at high water, forms whirlpools and rapids. This is la Boca del Infierno, and the Raudal de Camiseta. The first expeditions of Diego Ordaz (1531) and Alonzo de Herrera (1535) have given celebrity to this bar. The Great Cataracts of the Atures and Maypures were then unknown; and the clumsy vessels (*vergantines*) in which travellers persisted in going up the river, rendered the passage through the rapids extremely difficult. At present no apprehension is felt in ascending or descending the Orinoco, at any season, from its mouth as far as the confluence of the Apure and the Meta. The only falls of water in this space are those of Torno or Camiseta, Marimara, and Cariven or Carichana Vieja. Neither of these three obstacles is to be feared with experienced Indian pilots. I dwell on these hydrographic details, because a great political and commercial interest is now connected with the communications between Angostura and the banks of the Meta and the Apure, two rivers that lead to the eastern side of the Cordilleras of New Grenada. The navigation from the mouth of the Lower Orinoco to the province of Varinas is difficult only on account of the current. The bed of the river no where presents obstacles more difficult to