

most excited our attention were the dragon's blood (*Croton sanguifluum*), the purple-brown juice of which flows down a whitish bark; the *calahuala* fern, different from that of Peru, but almost equally medicinal;\* and the palm-trees, irasse, macanilla, corozo, and praga.† The last yields a very savoury palm-cabbage, which we had sometimes eaten at the convent of Caripe. These palms with pinnated and thorny leaves formed a pleasing contrast to the fern-trees. One of the latter, the *Cyathea speciosa*,‡ grows to the height of more than thirty-five feet, a prodigious size for plants of this family. We discovered here, and in the valley of Caripe, five new kinds of arborescent ferns.§ In the time of Linnæus, botanists knew no more than four on both continents.

We observed that the fern-trees are in general much more rare than the palm-trees. Nature has confined them to temperate, moist, and shady places. They shun the direct rays of the sun, and while the pumos, the corypha of the steppes and other palms of America, flourish on the barren and burning plains, these ferns with arborescent trunks, which at a distance look like palm-trees, preserve the character and habits of cryptogamous plants. They love solitary places, little light, moist, temperate and stagnant air. If they sometimes descend towards the sea-coast, it is only under cover of a thick shade. The old trunks of the cyathea and the meniscium are covered with a carbonaceous powder, which, probably being deprived of hydrogen, has a metallic lustre like plumbago. No other plant presents this pheno-

\* The calahuala of Caripe is the *Polypodium crassifolium*; that of Peru, the use of which has been so much extended by Messrs. Ruiz and Pavon, comes from the *Aspidium coriaceum*, Willd. (*Tectaria calahuala*, Cav.) In commerce the diaphoretic roots of the *Polypodium crassifolium*, and of the *Acrostichum huascar*, are mixed with those of the *calahuala* or *Aspidium coriaceum*.

† *Aiphanes praga*.

‡ Possibly a *hemitelia* of Robert Brown. The trunk alone is from 22 to 24 feet long. This and the *Cyathea excelsa* of the Mauritius, are the most majestic of all the fern-trees described by botanists. The total number of these gigantic cryptogamous plants amounts at present to 25 species, that of the palm-trees to 80. With the cyathea grow, on the mountain of Santa Maria, *Rhexia juniperina*, *Chiococca racemosa*, and *Commelina spicata*.

§ *Meniscium arborescens*, *Aspidium caducum*, *A. rostratum*, *Cyathea villosa*, and *C. speciosa*.