

with filling at the spring two bottles, which were sent, along with the nourishing milk of the tree called *pálo de vaca*, to MM. Fourcroy and Vauquelin, by the way of Porto Cabello and the Havannah. This purity in hot waters issuing immediately from granite mountains is in Europe, as well as in the New Continent, a most curious phenomenon.* How can we explain the origin of the sulphuretted hydrogen? It cannot proceed from the decomposition of sulphurets of iron, or pyritic strata. Is it owing to sulphurets of calcium, of magnesium, or other earthy metalloids, contained in the interior of our planet, under its rocky and oxidated crust?

In the ravine of the hot waters of Mariara, amidst little funnels, the temperature of which rises from 56° to 59° , two species of aquatic plants vegetate; the one is membranaceous, and contains bubbles of air; the other has parallel fibres. The first much resembles the *Ulva labyrinthiformis* of Vandelli, which the thermal waters of Europe furnish. At the island of Amsterdam, tufts of lycopodium and marchantia have been seen in places where the heat of the soil was far greater: such is the effect of an habitual stimulus on the organs of plants. The waters of Mariara contain no aquatic insects. Frogs are found in them, which, being probably chased by serpents, have leaped into the funnels, and there perished.

South of the ravine, in the plain extending towards the shore of the lake, another sulphureous spring gushes out, less hot and less impregnated with gas. The crevice whence this water issues is six toises higher than the funnel just described. The thermometer did not rise in the crevice above 42° . The water is collected in a basin surrounded by large trees; it is nearly circular, from fifteen to eighteen feet diameter, and three feet deep. The slaves throw themselves into this bath at the end of the day, when covered with dust, after having worked in the neighbouring fields of indigo and sugar-cane. Though the water of this bath (baño) is habitually from 12° to 14° hotter than the air, the negroes call it refreshing; because in the torrid zone this term is

* Warm springs equally pure are found issuing from the granites of Portugal, and those of Cantal. In Italy, the Pisciarelli of the lake Agnano have a temperature equal to 93° . Are these pure waters produced by condensed vapours?