

appear brown like coffee, or of a greenish black. These waters, notwithstanding, are most beautiful, clear, and agreeable to the taste. I have observed above, that the crocodiles, and, if not the zancudos, at least the mosquitos, generally shun the black waters. The people assert too, that these waters do not colour the rocks; and that the white rivers have black borders, while the black rivers have white. In fact, the shores of the Guainia, known to Europeans by the name of the Rio Negro, frequently exhibit masses of quartz issuing from granite, and of a dazzling whiteness. The waters of the Mataveni, when examined in a glass, are pretty white; those of the Atabapo retain a slight tinge of yellowish-brown. When the least breath of wind agitates the surface of these 'black rivers' they appear of a fine grass-green, like the lakes of Switzerland. In the shade, the Zama, the Atabapo, and the Guainia, are as dark as coffee-grounds. These phenomena are so striking, that the Indians everywhere distinguish the waters by the terms black and white. The former have often served me for an artificial horizon; they reflect the image of the stars with admirable clearness.

The colour of the waters of springs, rivers, and lakes, ranks among those physical problems which it is difficult, if not impossible, to solve by direct experiments. The tints of reflected light are generally very different from the tints of transmitted light; particularly when the transmission takes place through a great portion of fluid. If there were no absorption of rays, the transmitted light would be of a colour corresponding with that of the reflected light; and in general we judge imperfectly of transmitted light, by filling with water a shallow glass with a narrow aperture. In a river, the colour of the reflected light comes to us always from the interior strata of the fluid, and not from the upper stratum.

Some celebrated naturalists, who have examined the purest waters of the glaciers, and those which flow from mountains covered with perpetual snow, where the earth is destitute of the relics of vegetation, have thought that the proper colour of water might be blue, or green. Nothing, in fact, proves, that water is by nature white; and we must always admit the presence of a colouring principle, when water viewed by reflection is coloured. In the rivers that contain a colouring