lation of the fixed stars when they have risen 12° or 15° above the horizon, give the vault of heaven a peculiar character of mild effulgence and repose. I have already referred in many of my delineations of tropical scenery to this characteristic, which was also noticed by the accurate observers La Condamine and Bouguer, in the Peruvian plains, and by Garcin,* in Arabia, India, and on the shores of the Persian Gulf (near Bender Abassi).

As the aspect of the starry heavens, in the season of the serene and cloudless nights of the tropics, specially excited my admiration, I have been careful to note in my journals the height above the horizon at which the scintillation of the stars ceased in different hygrometric conditions. Cumana and the rainless portion of the Peruvian coast of the Pacific, before the season of the *garua* (mist) had set in, were peculiarly suited to such observations. On an average, the fixed stars appear only to scintillate when less than 10° or 12° above the horizon. At greater elevations, they shed a mild, planetary light; but this difference is most strikingly perceived when the same fixed stars are watched in their gradual rising or setting, and the angles of their altitudes measured or calculated by the known time and latitude of the place. In some serene and calm nights, the region of scintillation extended to an elevation of 20° or even 25°; but a connection could scarcely ever be traced between the differences of altitude or intensity of the scintillation and the hygrometric and thermometric conditions, observable in the lower and only accessible region of the atmosphere. I have observed, during successive nights, after considerable scintillation of stars, having an altitude of 60° or 70°, when Saussure's hair-hygrometer stood at 85°, that the scintillation entirely ceased when the stars were 15° above the horizon, although the moisture of the atmosphere was so considerably increased that the hygrometer had risen to 93°. The intricate compensatory phenomena of interference of the rays of light are modified, not by the quantity of aqueous vapor contained in solution in the atmosphere, but by the unequal distribution of vapors in the superimposed strata, and by the upper currents of cold and warm air, which are not perceptible in the lower regions of the atmosphere. The scintillation of stars at a great altitude was also strikingly increased during the thin yellowish red mist which tinges the heavens

* *Lettre de M. Garcin, Dr. en Med. à M. de Réaumur*, in *Hist. de l'Académie Royale des Sciences, Année* 1743, p. 28–32.