

A TRIP TO THE STARS.*



HERE are two methods of treating this subject: one light and amusing, but by no means scientific; the other, serious and grave, but instructive and true. The former may be termed "Astronomy for the credulous and illiterate." In it everything is grotesque

and false. It is astronomy such as is found in those almanacs that depict the sun as a fat and paunchy fellow, well wrapped up in furs and wool, no doubt to set hoary winter at defiance. The moon, so they say, is a rusty, second-hand sun, just fit for the night; or it is the king of day peeping through a hole bored in the firmament to see what some folks do during the night, when the real sun shines not. With such an astronomy we travel not in the moon's real empire; but, in company with the famous *Cyrano de Bergerac*, we enter the land of dreams and illusions. We see all that we fancy and like, or, rather, we see all that is not in the moon and nothing of what is in it. Away with this method and let us follow the second, endeavouring, as old *Horace* said, to combine two things—instruction with pleasure. Since it is late, and we have a long way to travel, let us begin at once by saying a few words on the sun, the planets and the stars. This will occupy the first half of our *soirée*. We shall next discuss the probability of the plurality of worlds.

Many have lauded in prose or rhyme the charms of day. But how majestic and fair night is, when she comes with her melancholy brow crowned with stars and her dark trailing robe glittering with pearls. If day has but one sun, night possesses millions of them, the brilliancy of which invites us to soar above to the very throne of the Eternal. Here on earth we are wrapped in the very swaddling clothes of ignorance; a thick and heavy fog obscures the narrow horizon that encircles us. Let us mount to the

upper and unknown regions, and there, to our bewildered eye, the earth shall appear as a globe under our feet, basking in the blaze of the sun, and with it, thousands of similar globes floating in the ethereal regions; there we shall form a faint idea of the marvels of creation. First, away with illusions. Do not represent to yourselves the earth as being the lower portion of the universe, and the heavens the upper part. No; heaven and earth are not two distinct creations, but one only. The earth moves in the heavens, and the heavens are boundless space, an indefinite extensiveness, an illimited expanse with no frontier to circumscribe it; with no beginning, no end, no depth; and our globe is like a soap bubble floating in that immensity. Our planet is not isolated in the fields of the infinite. These glittering stars over your heads are so many worlds, so many dazzling suns. They are far away. But there are other heavenly bodies nearer to us than the stars, and more similar and nearer akin to our terrestrial abode, in this way, that like the earth they are opaque, obscure bodies, and borrow their light from the sun. We call them planets. The earth is one of these which, eight in number, revolve around the sun. Hurlled into the fields of space, that group is like a fleet sailing in the ethereal ocean.

Let the earth be our starting point—it is quite natural—and let us go straight onward to any point of the heavenly sphere. Lo! we start and travel, not with the speed of a cannon ball at the rate of 900 miles an hour, which indeed is pretty fair travelling. Yet 'tis too slow. There are quicker motions in nature. Light, for instance, travels at the rate of 190,000 miles a second. Well then, gentlemen, you have paid your fare, get yourselves ready for a ride; not on horse-back, nor on the back of a mule or an ass, nor upon the wings of an eagle; no, but I want you to enjoy the most pleasant and swiftest ride you ever had; on what? on a sun-beam. Steady! stand firm; use the spurs

*Read before the Scientific Society by Rev. A. Pallier, O.M.I.