the beautiful combination of a large white star and a small one of a rich ruddy purple. It is by no means, however, intended to say that in all such cases one of the colors is a mere effect of contrast ; and it may be easier suggested in words than conceived in imagination what variety of illumination two suns, a red and a green, or a yellow and a blue one, must afford a planet circulating about either, and what charming contrasts and grateful vicissitudes, a red and green day, for instance, alternating with a white one and with darkness, might arise from the presence or absence of one or other or both above the horizon. Insulated stars of a red color almost as deep as that of blood, occur in many parts of the heavens, but no green or blue star of any decided hue has we believe ever been noticed unassociated with a companion brighter than itself." This variety of colors in the double stars arises doubtless for the most part, if not altogether, from complementary colors ; and as to the stars that appear insulated, and exhibit a red color, we know there are different degrees of whiteness in light ; the light of a candle, for example, or that which arises from the incandescence of some of the elementary substances is not as clear a white as the solar light ; and, further, when we come to note the color of different stars, and compare it with former records, we find that in a few instances a change has taken place. Thus, Sirius, which now shines with a pure bright light, is spoken of by old observers as a ruddy star. There are also many others which exhibit changes in brilliancy ; and these changes seem in most cases to be periodical. The star on which this discovery was made is *Omiron Ceti*, called also Mira, or the wonderful star, a name that is very appropriately given to it. At the time of its greatest brightness it is usually of the first or second magnitude, it then decreases for two or three months till it becomes invisible, and remains so for about five months, its minimum brightness being about equal to that of a star of the twelfth magnitude. It then again appears, and the whole period occupied in these changes is about 331 days. Algol or *Beta* Persei is another variable star, remarkable for its short period and rapid changes. It ordinarily appears a star of the second magnitude, but in a period of three and a-half hours it diminishes in brightness to the fourth magnitude, and after a few minutes begins again to increase, and attains its former brilliancy in another period of three and a half hours. At this it remains two days thirteen hours, and then the same series of changes recurs.

We have mentioned that the telescopic stars are classed into magnitudes, according to their apparent brightness through the telescope. The question naturally suggests itself whether these different degrees of brightness result from differences in the size of the stars, or in their distances. To this it cannot be answered with certainty, as there are only a few stars whose distances have been approximately measured. There appears,