

The Aspect of Mars in 1877.

In the autumn of 1877 I took advantage of the favourable position of Mars to examine its surface whenever possible with the reflector of three feet aperture at Birr Castle. As often as the steadiness and quality of the image was considered sufficient to admit of a trustworthy sketch being made, the planet was drawn. Twelve of the drawings have recently been published in the Scientific Transactions of the Royal Dublin Society, New Series Vol. I, but as this publication may not be easily accessible to many Astronomers, it will perhaps not be useless to give a list of the drawings here.

Fig. 1	Sept. 7.	11 ^h 50 ^m	Greenwich M. T.
2	"	8.	11. 0
3	"	8.	11.50 (time uncertain)
4	"	12.	11.20
5	"	15.	11.35
6	"	16.	10.55
7	"	17.	10.55
8	"	28.	11.15
9	Octob. 1.	10.55	
10	"	3.	11.10 +
11	"	8.	9.40
12	"	10.	9.10

As an elaborate Memoir on this subject may soon be expected from the hand of Mr. Green, whose drawings (made under infinitely more favourable circumstances

than mine) are to be published by the Royal Astronomical Society, I shall not here discuss my sketches in detail, but only add the following few remarks on some of the most prominent features on the surface of Mars.

„Lockyer Sea“ (Mädler's *d*) was always seen of a very regular shape, slightly oval east and west. A connection between it and „De la Rue Sea“ (such as is shown very distinctly by Mädler, Lockyer, Kaiser and others) was suspected but never clearly made out. On sketch Nr. 9 a small isolated dot appears midway between the two spots in question, which appears also to have been seen by Mr. Green (Monthly Notices, XXXVIII p. 42).

„Dawes' Sea“ north of *d* seems only to be a thin streak running east and west.

The two long narrow bands, which on Proctor's chart are called „Bessel's Inlet“ and Huggins' Inlet,“ were never seen.

„I. Herschel Strait“ (Mädler's *a—e*) ends at „Dawes Bay“, east of which „Phillip's Island“ is joined to „Dawes Continent.“ „Dawes Ocean“ is considerably darker along the edges than in the middle; the region south of it was seen to be very different from the chart and more in accordance with Kaiser's drawings.

The Observatory, Dunsink, Dublin. December 1878.

J. L. E. Dreyer.

On the Distribution of Red Stars.

I have projected most of the red stars in Birmingham's catalogue without regard to magnitude on an isographic projection of the northern hemisphere. The catalogue is less complete as regards southern stars, so I did not deem it expedient to project those. I also excluded most of the double stars. About half the stars are inside the milky way, but of the remainder many are situated in the neighbourhood, — so that it may be said, that four red stars out of every seven are situated in or near the milky way. This will explain the difference of opinion concerning the distribution of red stars, d'Arrest maintaining that „general distributions in the spectra in certain directions in space do not exist at all, or at least are not discerned“, which others state to be the case, — as the milky way passes through those constellations, which are said to be rich in ruddy stars. These appear not to be distributed more irregularly than other stars. Some

regions outside the milky way are perhaps a little richer in red stars than others e. g. round about Corona Borealis, in Pegasus and in the northern part of Virgo. In other places no red stars have yet been found, and this is generally where brighter stars are scarce, but many ruddy stars are situated near each others and thus give still more forcible indication of physical connection, than those bright uncoloured stars, which are gathered within certain small areas on the sky. It has been suspected, that the red stars are really old suns, which have been nearly burnt out, and that they are visible to us only when very near. It must be confessed, that the circumstance of their being distributed much like other stars, does not lend support to this hypothesis. — Mr. Birmingham asks me to state, that his catalogue, which appeared in the Transactions R. J. A. is to be had from Williams & Norgate in London.

Markree-Observatory 1878 Dec. 16. *W. Doberck.*