

THE FOLLOWERS IN "PARALLAX."

[2791.]—I FEAR Mr. Wallace (whom let me here thank for the many pleasant hours his books have afforded me) does not fully appreciate the position of those who believe in "Parallax" (letter 2760). His reasoning is, of course, conclusive against a flat earth; and, by the way, his second proof I gave at some length in my papers on "The Earth—Her Figure and Motions," in the ENGLISH MECHANIC for 1870; but that reasoning will scarcely prevail with the followers of Mr. Rowbotham. I imagine, indeed, that Mr. Wallace has not yet seen the theory of "Parallax" in all its splendour; for he speaks of the rising and setting of the sun above the imagined plane earth. But, according to "Parallax," the sun is *never below the plane*. The sun is somewhere about 2,000 miles above the plane of the earth *at all times*, and what we call setting is merely due to increase of distance. At midnight, for instance, in spring or autumn, the sun is more than 2,000 miles above the level of the earth's plane, only he is about 10,000 miles away towards the north. That is why he seems to be below the horizon. It is true that calculation would show that he should be some 12° or so above the horizon, and therefore presumably visible; but that is a detail.

I did once convince a Parallaxite. I got him to show me exactly how the sun was placed according to "Parallax"—first at noon in summer, and secondly at noon in winter. The difference of altitude was fairly accounted for; and this I admitted, to the delight of the honest disciple of "Parallax," who already rejoiced over me as a convert. "I knew," he was good enough to say, "that I need only show *you* the reasoning of the great zetetic philosopher to convince you." "But I perceive," I remarked, "that according to your instructive diagram"—drawn carefully to scale—"the midday sun in winter is about three times as far off as the midday sun in summer. That accounts nicely for the difference in temperature. Only it seems as though the sun ought to look nine times larger in summer—a circumstance which hitherto I have failed to notice." The really honest Parallaxite made answer, "What a—participle—jackass I must be!" and he spoke for a while in stronger terms of "Parallax" than are commonly heard in good society. He saw, indeed, that, in his faith in "Parallax," he had "written himself down an ass." RICHD. A. PROCTOR.

THE SHAPE OF THE EARTH CONTROVERSY.

[2832.]—I HAVE no wish to enter into argument with "W. G." or any of Mr. Rowbotham's "gentle convertites;" but some of his statements (let. 2792) are erroneous. The moon was not above the horizon of London at a quarter to three p.m. on Jan. 17, 1870; she did not rise till about half-past four. The middle of the eclipse of July 12, 1870, again, did not occur while the sun was above the horizon of London, unless the sun remained unset until half-past ten p.m., at which hour the middle of the eclipse took place. Every one knows, however, that the eclipsed moon can at times be seen when the sun is apparently above the horizon, and every schoolboy knows why.

I once heard Parallax asseverate that he could see the hulls of certain ships through the same telescope which failed (at the same time and place) to show those hulls to any one else who was present (scene, the Hoe at Plymouth; time, an autumn morning—singularly calm and clear—in 1863); but I have not yet heard of the man who saw the Alleghany Mountains from Teneriffe. He must have known the mountains pretty well, and was presumably a native of Virginia. I should think he must have been a very pleasant fellow, whether the earth is flat or round.

Why are the ideas of us Newtonians "execrable"? Is not that rather a strong word? We use such mild words by comparison. None of us execrate Parallax or abominate Hampden, I am sure. The late Admiral Smyth speaks of Sir Richard Phillips as a fanciful person, and describes in a very good-humoured way a visit (not invited) paid him by that worthy alderman. In quoting Sir Richard's remarkable use of the word execrable, has "W. G." any clear idea of its meaning?

RICHARD A. PROCTOR.

4. He asserts that the moon has a self-luminous and an opaque hemisphere, and that her phases are caused by a rotation which brings these alternately into view.

5. He asserts that the earth is a flat circular plane, having the Arctic regions at its centre, and the Antarctic regions at the circumference.

6. He asserts that the heavens have but one pole.

7. He asserts that the sun is about 2,700 miles at *all times* above the level of the plane earth, whose diameter (from the Antarctic regions across North Pole to Antarctic regions) is about 25,000 miles, so that even though the sun and the observer were at opposite extremities of the diameter, the sun would be more than six degrees above the horizon. Since

$$\frac{2700}{25000} = \cdot 108 = \text{tang. } 6^{\circ} 10'.$$

But, as a matter of fact, by "Parallax's" theory the distance of the sun, measured horizontally, can never exceed some 20,000 miles, which would give as the least possible elevation of the sun, $7^{\circ} 41'$; while the least elevation in England would exceed 12° .

8. Yet he asserts that the setting of the sun is due to increase of distance.

9. Though his theory sets the sun at distances from different parts of the earth, proportioned in extreme cases as about 7 to 1, he leaves it to be inferred that the sun would not vary appreciably in seeming size (to the unaided eye).

10. He asserts that the solid earth floats on the waters of ocean, and that the tides are due to the swaying of the earth, neglecting all the consequences (as to the positions of celestial objects) which would follow from this state of things.

11. In making extracts from the works of known writers, he systematically admits only those sentences which may be so misinterpreted as to support his theories.

12. He asserts that the Pole star was visible on a certain occasion from a point near the tropic of Capricorn, when in reality the observation quoted was made from a point near the tropic of Cancer.

13. He quotes in his favour the estimated distance traversed by a bottle in the southern seas, counting the degrees of longitude for the shortest course, though the original narrative plainly states that the bottle was carried by currents *the long way round*.

14. In his lectures he has repeatedly quoted the opinions of others in such a way as to lay himself open to direct contradiction on their part.

15. He has, in the presence of many, asserted that he could see certain hulls which no one else could see, though they used the same telescope pointed towards the same parts of the horizon at the same time and on the same spot.

16. To support his theory he has described the southerly latitudes of certain New Zealand towns as corresponding to the northerly latitudes of places in England, though in reality those New Zealand towns (Wellington and Auckland) have latitudes severally corresponding much more nearly to the latitudes of Rome and Tunis.

17. To support his theory he has invariably taken Sin. as the difference of apparent level due to a distance of one mile; though it is a known fact (*dwelt upon* in books he has himself quoted) that levellers practically take $6\frac{1}{2}$ in. (in rough work) as the mean difference of apparent level for a mile, atmospheric refraction reducing what may be called the estimated geometrical amount by $1\frac{1}{2}$ in.

I do not assert that he has deliberately told falsehoods, or that he does not himself believe what he professes to teach. He may be self-deceived, where he has stated untrue things; and he may so fully believe his theories as to feel justified in garbling extracts for their support. On these points I say nothing; but this I must say, that whatever his object may be, and whatever may be the explanation of his conduct, his ideas are unworthy of serious discussion, while his mode of presenting them is, on the face of it, open to objections so grave that, even were his ideas not utterly preposterous, no one could wisely enter into argument with him.

I beg of you most earnestly not to suffer your columns to be degraded by the serious discussion of these absurdities, to use no harsher expression.

RICHARD A. PROCTOR.

THE THEORIES OF "PARALLAX."

[2937.]—I BEG to appeal most earnestly against your proposition on this subject. No astronomer who values his reputation can possibly write (unless anonymously) for a journal in which the absurdities of "Parallax" are treated (no matter by whom) as worthy of serious discussion, or classed with the Newtonian system as though the two were "rival theories."

Furthermore, if Newtonian astronomy really needed defence, Mr. Wallace—I say it with all respect—would not be our selected champion. It would be as fitting to set Professor Airy to defend the theory of natural selection, or some eminent coleopterist to defend the accepted chemical theories. Moreover, Mr. Wallace is not acquainted with the notions of "Parallax." His first letter showed this very clearly.

I consider that the following facts in connection with Mr. Rowbotham's books and doings suffice to justify the immediate (and final) dismissal of the zetetic philosophy from your columns:—

1. He has asserted, respecting his own Bedford Canal experiments, what the experience of all trustworthy witnesses belies.

2. He has described in his book an experiment with an air-gun with results which are physically impossible (I mean the return of the bullet into the barrel twice in a small number of trials).

3. He asserts the existence of a semi-transparent body, otherwise unknown, which causes eclipses of the moon.