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HISTORY OF THE ROYAL ASTRONOMICAL SOCIETY

CHAPTER I

THE DECADE 1820–1830. (By H. H. TURNER)

WE are indebted to Sir * John Herschel for keeping a diary which begins almost providentially with the year 1820, and from which the Herschel family have kindly made the following extracts :—

Sat., Jan. 1.—Dined with Peacock and Babbage at Provost Goodall's at Eton, & met Col. Thackeray, Vice-Provost Roberts, Capt. Roberts (R.N.), etc.

Sun., Jan. 2.—Peacock and Babbage left Slough after spending a few days here.

Wed., Jan. 12.—Dine (*sic*) at the Freemason's Tavern to meet Dr. Pearson & other gentlemen to consider of forming an *Astronomical* Society.

Sat., Jan. 15.—To attend Committee of y^{e} Astronomical at Geol. Soc. Rooms at 10 o'clock.

Evening.—Mr Lowry's to tea to meet Wollaston, Babbage, Gompertz, Perkins, & Col. Fairman.

Mon., Jan. 17.—Went to Dr. Pearson's, Sheen, near Richmond, where I dined & spent the night. At night took Mars' diam^{r} by way of trying Dr. Pearson's Double image Micrometer.

Tues., Jan. 18.—Spent morning at Dr. Pearson's. Babbage came about 1^{h}. Read over & arranged address for circulation with the notice of formation of y^{e} Astronomical Soc. Dined & returned with Dr. P. and Babbage to the meeting of the C^{tee} in the Evening.

Thurs., Jan. 20.—Returned in the afternoon to Slough.

Mon., Jan. 24.—Death of the Duke of Kent.

Wed., Jan. 26.—Despatched letters concerning the Astronomical Society (the Address & a Circular letter) to Catton, Peacock, & Fallows.

Sat., Jan. 29.—Death of the King.

* Knighthood was not conferred till 1831 (followed by Baronetcy in 1838), but for simplicity the familiar name has been used throughout.

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A few later extracts are deferred for use in other connections. From the above we gather the important fact that the preliminary meeting was held either before or after dinner at the Freemason's Tavern on January 12. Many years later De Morgan rejoiced to find other evidence of this dinner, which had become almost legendary: the diary shows that it was a pleasant addition to the formal business of the preliminary meeting, fully preserved for us in the Minutes, which may now be given verbatim :—

MINUTES OF THE GENERAL MEETINGS OF THE ASTRONOMICAL SOCIETY OF LONDON

Wednesday, January 12, 1820

On this day several gentlemen, whose names are hereafter mentioned, met together by appointment, at the Freemason's Tavern, Great Queen Street, Lincoln's Inn Fields, London, to take into consideration the propriety and expediency of establishing a Society for the encouragement and promotion of Astronomy. The following are the names of the gentlemen present :—

No. 1. Charles Babbage, Esq., M.A., F.R.S.L. & E., No. 5 Devonshire Street, Portland Place.
2. Arthur Baily, Esq., No. 6 Gower Street.
3. Francis Baily, Esq., F.L.S., Gray's Inn.
4. Capt. Thomas Colby, of the Royal Engineers, LL.D., F.R.S.E., Tower.
5. Henry Thomas Colebrooke, Esq., F.R.S. & S.A., Albany, Piccadilly.
6. Olinthus G. Gregory, LL.D., Woolwich.
7. Stephen Groombridge, Esq., F.R.S., Blackheath.
8. John Fred. W. Herschel, Esq., M.A., F.R.S.L. & E., Slough.
9. Patrick Kelly, LL.D., Finsbury Square.
10. Daniel Moore, Esq., F.R.S., S.A., and L.S., Lincoln's Inn.
11. Rev. William Pearson, LL.D., F.R.S., East Sheen.
12. James South, Esq., 11 Blackman Street, Southwark.
13. Charles Stokes, Esq., F.S.A. & L.S., Gray's Inn.
14. Peter Slawinski, D.P. Proff. University, Wilna.

The following mutual agreement was then drawn up and signed by all the gentlemen present, viz. :—

"At a meeting held this twelfth day of January 1820, at the Freemason's Tavern, London, to take into consideration the advantages that are likely to result from the establishment of a Society for the cultivation of Astronomy,—We, whose names are hereunto subscribed, being fully aware of the utility of such an institution, do hereby mutually agree to constitute ourselves a Society, to be called the Astronomical Society of London; and to be guided, in our future proceedings, by such

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rules and regulations as may be formed for such Society, in the manner to be appointed at the present meeting for that purpose."

Resolved unanimously—

1. That a Committee of eight members be appointed to draw up such rules and regulations; and that three be a quorum.

Resolved unanimously—

2. That C. Babbage, Esq.; F. Baily, Esq.; Capt. T. Colby; H. T. Colebrooke, Esq.; Dr. Gregory; J. F. W. Herschel, Esq.; D. Moore, Esq.; and Rev. Dr. Pearson be the Committee above mentioned.

Resolved unanimously—

3. That a general meeting of the members take place on Tuesday, February the 8th, at the house of the Geological Society in Bedford Street, Covent Garden, at 7 o'clock in the evening precisely; to take into consideration the rules and regulations which may be then proposed by the Committee.

Resolved unanimously—

4. That any person, recommended by one of the present members of the Society, who may be desirous of joining the Society at, or prior to, the above-mentioned general meeting, shall, on previously signifying in writing his assent to these resolutions, or on authorising a member by letter to signify the same on his behalf, be considered a member thereof without ballot.

Resolved unanimously—

5. That the Committee be authorised to draw up an Address, explanatory of the motives and object of the Society; and to circulate it in such manner as they may think fit.

Resolved unanimously—

6. That F. Baily, Esq., be Secretary *pro tempore*.

Memorandum.—It was omitted to be stated, in its proper place, that D. Moore, Esq., was unanimously called to the Chair.

FRANCIS BAILY, Secretary *pro tem.* DAN. MOORE, Chairman.

Returning to the Diary of Sir John Herschel, we see that the first action of the infant Society was the preparation of an Address, and that it was undertaken by Herschel himself, possibly with the help of Pearson and Babbage. The MS. was probably handed to the Secretary, Francis Baily, on the evening of Wednesday, January 19, and on the following Saturday he was able to write announcing that it was in type :—

GRAY'S INN, *Jan.* 22, 1820.

DEAR SIR,—I think you will say that the printer and myself have managed admirably well in being able to decipher and arrange the very rough copy which you left us. There was but one passage which I could not exactly make out; but as the meaning was evident, I was at no loss to complete the sentence.

There is one liberty I have taken with it, which is the insertion

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of that passage in page 5 which you had struck out of the MS., but which I thought was too excellent to be thus discarded. On the whole I think the Address admirably adapted to its purpose, and I have no doubt it will be read with pleasure and profit by every lover of Astronomy.

The proof has been finished only this morning, and I have ordered 250 copies to be struck off this afternoon, in order that they may be dried to-morrow; and, after lying in the press on Monday, be ready for distribution on Tuesday. Had I waited for the return of the enclosed proof, the *whole* of that time would have been lost; and I think it of material consequence to circulate them as soon as possible. Some will be sent to Scotland, and there will be scarcely time to receive an answer prior to the general meeting, if the printing had been delayed.

However I have thought it better to send you the enclosed copy, in order that you might inspect it prior to its publication: so that, if it did not meet your entire approbation, it might be reprinted, with any alterations you may think advisable. For my own part (and I speak also the opinion of many of the members), I think it cannot be mended.

I shall be obliged by an answer, as early as convenient, addressed to me at the *Stock Exchange*; and at the same time you will be good enough to inform me, by what conveyance it would be most advisable to forward such copies of the Address and of the Circular as you may wish for distribution.

With my compts. to Sir William and Lady Herschel, believe me, yours truly, D^{r} Sir, FRANCIS BAILY.

5 *o'clock.*—I have waited till the last moment, expecting the printer to send me a copy of the Address; but, being disappointed, I have despatched this letter without it: to know whether you would prefer seeing it before it is circulated; or whether I shall forward them as at first proposed?

On the Monday, Baily was able to send a dozen copies of the Address, but he probably did not get the approval for which he hoped; for though Sir John's reply has not been preserved, the following sentences from a letter to Babbage dated 1820 February 2, sufficiently indicate his views on the printing of the Address.

> Baily made sad work of that scrawl of an address I left with him—it was, to be sure, in great measure my fault, but here and there he has totally inverted the sense of it and made me say what my soul abhors. However, it is the address of the whole Committee, and nonsense distributed among so many will lie lightly on each. However, if you have any copies by you still undistributed, do in pity strike out the word "not" in page 8 line 12 in them before you send them abroad.

To identify the offending passage it is necessary to refer to a copy of the octavo pamphlet in which the Address originally

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appeared. It will serve a double purpose to quote the whole sentence, italicising the word to be struck out.

> One of the first great steps towards an accurate knowledge of the construction of the heavens, is an acquaintance with the individual objects they present; in other words, the formation of a complete catalogue of stars and other bodies, upon a scale infinitely more extensive than any yet undertaken; and to be carried down to the minutest objects, *not* visible in any but the very best telescopes.

It is rather puzzling to find that it is impossible to strike out the word *not* as directed if the sense of the passage is to be preserved. The emendation adopted in *Mem.*, **1**, 4, is:

> and that shall comprehend the most minute objects visible in good astronomical telescopes.

The whole construction has, of course, been altered. Sir John's complaint seems to have been a little hasty, for comparison of the Address as fully revised in the *Memoirs* with the copy put through the press by Baily, only reveals one serious alteration of the sense. The original reads:—

> A well-made instrument will thus unavoidably acquire a reputation, not merely among a few eminently skilled observers as at present, but throughout the astronomical world of Britain.

but the last two words have clearly got into the wrong place, and in the revised version are restored to the other leg of the contrast—"a few eminently skilful observers in Britain as at present, but throughout the whole astronomical world."

It is, however, interesting to see what did ultimately happen to one sentence which Sir John had written, and then struck out in MS., but which Baily nevertheless printed. When Sir John got his dozen copies he again struck it out, and again Baily pleaded for it.

> I have ventured, however, to retain the passage in page 5 which you had a second time struck out; it certainly is too impressive to be lost, and so has thought everyone to whom the passage has been read; so that if we have done wrong, we must *all* bear the blame equally. It is, however, transposed from its former position to one where it was considered more apposite.

The transposition enables us to identify the passage, which is as follows:—

> Yet it is possible that some bodies, of a nature altogether new, and whose discovery may tend in future to disclose the most important secrets in the system of the universe, may be concealed

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under the appearance of very minute single stars no way distinguishable from others of a less interesting character, but by the test of careful and often repeated observations.

We may now declare the secondary purpose with which the former passage was quoted, and which has prompted also the relation of these details somewhat more fully than occasion perhaps seemed to warrant. In recurring to these early days after the lapse of a century, there can scarcely be a better motive than that of realising what was in the minds of these pioneers, and seeing what came of it. As one item alone in their programme, they did not hesitate to announce it as their ambition to survey the whole sky by co-operative endeavour down to the minutest star visible in the best telescopes, and that with the laborious methods of the time! Two-thirds of a century later, with the immensely powerful aid of photography at hand, their successors really embarked on this project, but have found it far beyond their resources. The sky has indeed been completely photographed, at Harvard and elsewhere, but this is only one step on the way to the scrutiny of each star—"careful and often repeated." The question forces itself on our attention whether our pioneers had really counted the cost; and we can only reply that, if they had not, they were only committing the same mistake which their successors, with far better information, repeated in 1887. They then initiated the project for the Astrographic Chart, which was to be completed in a dozen years, though to-day, after nearly three times that period, it is yet far from accomplishment. Of the enthusiasts who adopted so great a programme in 1820, probably Sir John Herschel had the best means of knowing what it involved; and we may perhaps read into his attempted deletion of the sentence some misgivings * whether ambition might not overreach itself. Possibly the cataloguing of every star might be achieved, by sharing out the work: but what about "careful and often repeated observations"? Perhaps that had better go out? However, the other enthusiasts were too many for him and it was ultimately retained.

We see then that the infant Society did not merely "hitch its waggon to a star," but would be content with nothing less than the whole universe of stars down to the minutest. Fortunately they were nevertheless men who realised well enough that whatever their ultimate aims might be, their beginnings must be eminently sober and practical. They started with the reform of the *Nautical Almanac*; and read papers to one another about micrometers and refraction; or arranged skeleton forms for

* On 1820 December 19, Sir John writes to Babbage: "Why not proceed to set on foot that 'regular systematic examination of the heavens' about which there is so much said *ad captandum vulgus* in the Address?"

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recording observations—hundreds of which remain blank to this day. But the observational programme was, as already mentioned, only one of the considerations put forward in the Address: others were the collation and publication of observations already made or to be made; the education of observers; the determinations of position on our earth; the improvement of lunar tables; the establishment of relations with foreign astronomers, who may be elected Associates; the diffusion of information; the computation of orbits; the formation of a library; and the proposal of prize questions.

Besides the Address, there were "regulations" (which ultimately became our "Bye-Laws") to be made before the first meeting on February 8. The death of the King on January 29 threw a cloud over this first meeting, so that after reading the Regulations, making some slight changes in them, resolving that they should be printed, as also the Address "with such alterations as [the Committee] may think proper" (wherein we probably catch a reflection of Sir John Herschel's grievances), it was decided to defer any but pressing business to "some future day out of respect to the memory of his late Majesty, whose funeral had not yet taken place." Under the circumstances it was creditable that twenty-one members attended this meeting: and the number of those who had formally joined the new Society was reported as forty-seven. The "future day" was fixed as February 29, when twenty-eight attended, including the Duke of Somerset, who was unanimously elected President. The Vice-Presidents were Colebrooke, Groombridge, Sir William Herschel, and the Astronomer Royal (Pond); Treasurer, Dr. Pearson; Secretaries, Babbage, Baily, and John Herschel (Foreign); and Council, Col. Beaufoy, Capt. Colby, Olinthus Gregory, T. Harrison, D. Moore, E. Troughton; while A. Baily, D. Moore, and C. Stokes were appointed Trustees. The roll of membership was by that time eighty-three. The meeting concluded with votes of thanks to the Geological Society for the hospitality of their rooms for these early meetings, and to Daniel Moore for his good offices as chairman: and so far all had gone well.

But at the next meeting a blow fell: Sir Joseph Banks, the President of the Royal Society, had induced the Duke of Somerset to decline the Presidency. It seems to have been quite unexpected, for Baily did not write about it to Sir John Herschel until March 11, the day after the meeting, and the Duke's letter is dated March 9, the day before. But apparently Sir Joseph Banks had been at work in various directions. Baily writes:—

> A similar attack was made by Sir Jos Banks on the Astronomer Royal, who, if report be true, made a very spirited reply. As a

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similar, and indeed a more violent, attack was made at the establishment of the Geological Society, and also of the Royal Institution, and which only tended to unite more firmly the original members, we hope that a similar result will also be produced here.

It seems also worthy of record that in Sir John Herschel's Diary there are the following entries :—

Sat., Feb. 26.—Committee of Astronomical. Dined with Mr. Baily.

Sun., Feb. 27.—Sir J. Banks.

Mon., Feb. 28.—Went in morning to Dr. Pearson's at East Sheen where I spent the day. In morning read over with the Dr. his paper on Micrometers for Astron. Society. Mrs. P. & Mr. & Mrs. Moffat were the party besides the Dr. & myself. In evening after a little music returned to London.

Tues., Feb. 29.—Took up quarters at Bedford Place & dined there. My Father and Mother came to dinner. Evening, attended the meeting of the Astronomical Society, at which my Father was voted a Vice-President. Babbage, one of y^{e} English Secretaries, & myself y^{e} Foreign.

N.B.—Duke of Somerset, Pres., to whom with the other Secretaries I was introduced by Dr. Pearson. Supped with Babbage.

Fri., Mar. 3.—Returned to Slough with my Father & Mother, calling on my uncle B. on the way.

Mon., Mar. 13.—Wrote to F. Baily in expression of strong indignation at the part Sir J. Banks has thought proper to take respecting the Astronomical Society in persuading the Duke of Somerset to resign y^{e} Presidentship—also desiring information on the subject of the private observatories on the Continent.

The cryptic entry of February 27 between two notes about the new Society, which was clearly occupying Sir John's thoughts to a considerable extent, can scarcely be interpreted otherwise than that Sir J. Banks must have known of the new Society on February 27, though he delayed action until after February 29. But without further preamble let us inspect the Minutes of the March *meeting of Council* :—

Minutes of Council

Friday, March 10, 1820

The first meeting of the Council took place this day at 3 o'clock in the afternoon ; present : H. T. Colebrooke, Esq. ; S. Groombridge, Esq. ; Rev. Dr. Pearson ; F. Baily, Esq. ; Col. M. Beaufoy ; Capt. T. Colby ; T. Harrison, Esq. ; D. Moore, Esq. ; E. Troughton, Esq. S. Groombridge, Esq., in the chair.

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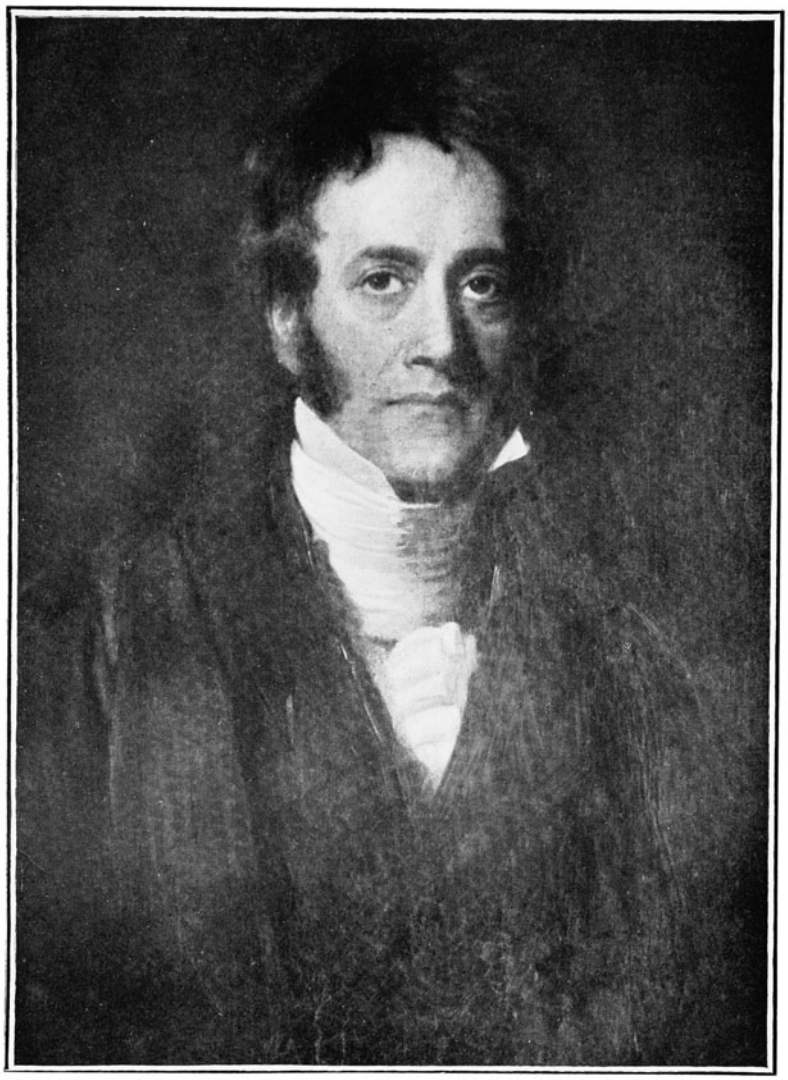

SIR JOHN HERSCHEL
(1792–1871)

To face p. 8.]

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