

### Early Science at the Royal Society.

October 19, 1664. Dr. Merret brought in his catalogue of trades, which was read and approved of; and it was ordered, that the amanuensis should fairly transcribe it against the next meeting, and that then it should lye exposed, at the time of the meeting of the society, for the several fellows to look it over, and to choose what trade they would give or procure the history of.—Mr. Hooke said he had observed, that upon the fall of the mercury wet weather followed.—Sir Paul Neile renewed his former motion of observing the figure of the sun at his rising and setting, both at Whitehall and Greenwich. Sir R. Moray was desired to observe it at Whitehall, and to recommend the observation of it at Greenwich to Mr. Marre.

1674. Mr. Hooke acquainted the council, that Sir Jonas Moore had been with him at Chelsea College, and made an overture of engaging a gardiner, a sufficient man, to take a lease of the house and land about it, and paying a yearly rent; allowing withal to the Society to make hortulan experiments there; as also to build an astronomical observatory, which latter Sir Jonas Moore would undertake to do at his own charges, to the value of an hundred and fifty or two hundred pounds.

October 21, 1669.—A Latin letter from Signor Malpighi was read acknowledging the favour of election, and in causing his discourse on the silkworms to be printed.—Thomas Willisel the botanic traveller, employed by the society, brought in his collection of plants gathered in several parts of England and Scotland, together with some rare Scottish birds and fishes.—The lord bishop of Chester acquainted the society, that his Majesty had expressed a desire of having the measure of a degree of the earth determined, and expected the assistance of the society in it.

October 22, 1662. Dr. Merret mentioned, that live worms are sometimes found in the stomachs and guts of salmons. He was desired to make some observations in those and other fishes. This gave occasion of discoursing upon what is called equivocal generation.—Dr. Charlton brought in his papers, in which he had reduced birds into certain families, in Latin and English; which papers were ordered to be kept; and the doctor was desired, in conjunction with Dr. Merret, to reduce fishes into the like classes.

1668. There was presented from Mr. Hevelius his "Cometographia," wherein he takes particular notice of the society in his address to the reader.

October 24, 1666. It was moved that the materials for building, and the several sorts of earth for making brick and tile, might now be considered by the society; who were desired to think upon it against the next meeting.—A paper communicated by Sir Theodore de Vaux was read concerning several ways of making cheap and sweet fires of coal-balls wherein sea-coal is by the mixture of other combustible bodies both sweetened and multiplied.—Sir Robert Moray presented the society for the repository with some stag's tears.

1667. The method of transfusing blood into a man, as it was contrived by Dr. King was read and ordered to be registered.—It being moved, that the experiment might be made accordingly, as it had been done already in foreign parts, Sir George Ent suggested, that he thought it most advisable to try it upon some mad person in the hospital of Bethlem. This being seconded by divers other physicians of the society, Dr. Lower [and others] were desired to speak with the physician to Bethlem, about the execution of this trial.

### Societies and Academies.

#### MANCHESTER.

Literary and Philosophical Society, October 7.—Miss Laura Start: The significance of some Iban textile designs.—J. Walton: On the existence of liverworts as fossils in the Carboniferous rocks of England. Dr. Lucy Wills has described some small dichotomously branched thalloid plants in shales of Upper Coal Measure Age in Staffordshire and suggested that they might possibly be fragments of a Bryophyte. Some clayey shale from the Middle Coal Measures of the Denbighshire coal-field yielded thalloid plants of a similar type of organisation, some with rhizoids attached. In addition, two fragments of a plant which cannot be other than a foliose liverwort were isolated by treatment of the same shale. This latter plant is distinctly dorsiventral. There are two rows of leaves, one on each side of the somewhat stout axial part of the shoot. The members of the two series alternate. On the under (or the upper?) surface of the axial part are two rows of smaller leaf-like appendages, each in definite relation to one of the larger leaves and lying close to it. Thus it is now clear that there were both thalloid and foliose forms of liverworts in existence in Carboniferous times.

#### PARIS.

Academy of Sciences, September 15.—M. Emile Roux in the chair.—Henry Le Chatelier: The viscosity of glass. A discussion of the experiments of E. Washburn and E. Shelton on the viscosities of soda lime glasses. These authors give their results in graphical form, but it is shown that the results of these measurements can be very exactly represented by the double exponential formula:  $\text{Log}(\log \eta) = -Mt + P$ , in which  $\eta$  is the viscosity,  $t$  the temperature, and  $M$  and  $P$  constants. Exterpolation to the annealing temperatures, 500° C. to 600° C., gives results not in agreement with earlier work, and it is suggested that glass, like sulphur, exists in two allotropic states.—W. Abbott: The breaking up of the southern polar cap of Mars. A description of the changes in the shape and appearance of the polar cap between May and August 14 of this year.—L. Dunoyer and P. Toulon: The interpretation of the sheath phenomena in arc relays.—H. Robert, P. Vernotte, and A. Jeufroy: The measurement of the heating of the brushes of electrical generators. The advantages of using a thermocouple instead of the conventional mercury thermometer are demonstrated: the differences are magnified when the size of the dynamo is reduced.—E. Hultén: The origin of the band spectrum of mercury. There is some evidence, not quite conclusive, that the bands are due to the formation of some compound of the metal with hydrogen. The bands are more intense when a current of hydrogen at low pressure (1 mm.) is passed through the tube, whilst a current of air has the opposite effect.—P. Vaillant: The conductivity of solid salts at high temperatures. The conductivity of solid sodium chloride first increased, then fell sharply. At 150° C. there was a rapid increase to the highest temperature employed (420° C.). On reheating, the initial rise and fall were not repeated but the increase from 150° C. was the same as on the first heating. Potassium sulphate and chloride behave similarly.—P. Loisel: The radioactivity of the granites from Guérat, near Bagnoles-de-l'Orne. Study of emilium. The study of the gases dissolved in the water of a certain number of springs in the Bagnoles-de-l'Orne region led the author to conclude