MISCELLANEOUS.

Phrenology.—A skull was sent, by one of the members of the literary society at Chatham, to Dr. Elliotson, the distinguished President of the London Phrenological Society; and the opinion of the Society was requested respecting the character of the individual to whom the skull had belonged. Dr. Elliotson's reply:

"I exhibited the skull, with which you favoured me, to the London Phrenological Society at their last meeting, and we were all perfectly agreed upon the character of its original possessor. The Society, however, never delivers a judgment upon character on any Phrenological point; but when an opinion is desired, leaves any member, or private individual, who may think it proper, to do so.

'I take it for granted that the deceased was of sound mind; but to be accurate, we should likewise know how far he had been educated, and whether his constitution was active or indolent.

"Ignorant of these particulars, I should say, that he was a man of excessively strong passions; that these were far an overbalance for his intellect; that he was prone to *great violence*, but *by no means courageous;* that he was extremely *cautious and sly*, and fond of *getting;* the animal propensity must have been strong, but *his love of offspring* very remarkable.

"I can discover no good quality about him, except the love of his children, if he had any. The most striking *intellectual* quality in him, I should think, was his *wit*. This must have been not only great, but probably of a dry cast.

"He might also have been a good mimic.

Dr. Elliotson had the satisfaction of being assured in reply—

"That his explanation of this character was *singularly* correct in every particular, affording a new and powerful proof of the truth of phrenology."

His correspondent, however, informs him that many persons, unable to overturn the facts of the case, turn round and say, that he must have had some previous or private intimation of the character of the individual in question. He puts the following questions at once openly to Dr. Elliotson:—

"Is your detail of the felon's character drawn solely and entirely from the shape of the skull?

"Had you any previous information whatever as to his past life, habits, or education?"

Dr. Elliotson's Reply.

"Sir,—I beg to assure you, that I drew my conclusions as to the character of the individual *solely* from the size of the various parts of the skull; and that up to the moment of receiving your letter yesterday, I

was totally uninformed respecting him.....The suggestion that I had gained some knowledge privately of the individual, or had taken a hint from any circumstance whatever, might have annoyed me, were I not unknown to the gentlemen—were I not conscious of detesting every species of duplicity—and were there not something irresistibly laughable in seeing the plain facts of phrenology give one such power, as to produce an astonishment in the minds of those ignorant of them, not dissimular from that which a little chemical and physical knowledge excited in times of darkness. In those days the power of knowledge was ascribed to the devil; at the present time, such agency being universally disbelieved, the manifestation of power is pronounced a deception The phrenologist, conscious of the truth, views the incredulity of the world as a correct measure of the magnitude of his science."

The individual whose skull formed the subject of this interesting experiment was a convict, known familiarly by the name of *Jack Turpin*. Little was known or could be learned from him of his previous life; but it was notoriously vicious and lawless: he had been a poacher and smuggler, but had never committed murder. After opportunity for better observing his character was afforded, the following particulars were ascertained:—

"*In the first place*, he exhibited a severe sarcastic wit, at the expense of those around him. The manners and language of the kind and benevolent clergyman, who officiates at the hospital, were the frequent subjects of his mimicry.

"*In the second place*, he exhibited a strong attachment to his children. He frequently spoke of them in the most affectionate manner, and made his last moments respectable, by devoting them to the disposal of his property among his offspring."

The following resolution, passed unanimously at a meeting of the Rochester Literary Club—the Society at whose request this experiment was made—well expresses the conclusion that should be drawn from such experiments.

"Resolved—That the character of L. given by Dr. Elliotson, from the inspection of the skull, corresponds so exactly with his history, that it is impossible to consider the coincidence as the effect of chance; but that it is an instance which, if supported by many others, affords a strong foundation for the truth of phrenology."

Recommendations of the Sub-Committees of the British Association for the Advancement of Science.

Meteorology.—The Committee, considering that the science of Meteorology is in more want, than perhaps any other, of that systematic direction which it is one great object of the Association to give, has thought it adviseable to propose the following points for investigation:—

I. That the Association should employ all the means in its power to procure *a Register of the Thermometer during every*

hour of the day and night, to be kept at some military or naval station in the South of England.

Note. Until the phænomena and distribution of diurnal temperature are more thoroughly understood than at present, we can hardly hope that any very sure footing has been obtained in the study of meteorology. The hourly register kept for several years at the military station of Leith Fort, in lat 56°, has shown that we want nothing but the combination of a sufficient number of trust-worthy observations, in order to obtain results of primary importance to the science, and which may one day enable us to arrive at the true form of the daily and annual curves of mean temperature with a precision almost mathematical. In order, however, to extend the benefit of such investigations, it is absolutely necessary that they should be pursued in different latitudes. The application to rendering available registers otherwise almost without value, from not being made at the proper hours, will be best illustrated by a reference to the account of the Leith observations. (Transactions of the Royal Society of Edinburgh, vol. x.)

II. That the establishment of such an *hourly meteorological register* be pointed out as a highly interesting object, in reference especially to the important point of *intertropical* climate, *to* THE COMMITTEE OF THE ASSOCIATION IN INDIA.

III. That *the Committee in India* be requested to endeavour to institute such observations as may throw light on *the phænomena of the horary oscillations of the barometer, near the equator.* Should the concurrence of the Committee on these points be obtained, it would probably be desirable that the Association should take measures for sending out delicate and accurate instruments.

IV. That Mr. Phillips and Mr. Wm. Gray, jun. of York, be requested to undertake *a series of experiments on the comparative quantities of rain falling on the top of the great tower of York Minster, and on the ground near its base.* The Committee have been induced to propose this specific question in consequence of the local fitness of the situation, and the facilities offered for its solution by the authorities; but it is to be wished that similar experiments should be made elsewhere, that by an extended comparison of observations, light may be thrown upon the anomalies which have been observed at Paris and in other places.

V. That the Association should express its desire to receive *a satisfactory exposition of the theory of the moistened bulb hygrometer*, and that observers be also invited to institute *series of comparative experiments on the indications of the moistened thermometer and the temperature of the dew point.*

Note These indications may be ascertained by Mr. Dalton's process, or by Mr. Daniell's Hygrometer, or by both. Notwithstanding the ingenious and laborious researches of Hutton, De Saussure, Leslie, Anderson, and Gay-Lussac upon this subject, scientific deductions drawn from more extended experiments are greatly

wanted. The simplicity and certainty of the experiment by which the cold produced by the evaporation of water is measured, renders an accurate theory of the result peculiarly desirable. The experimenter would do well to consult Mr. Dalton's views on the theory of Hygrometry, contained in his *Meteorological Essays*, and in *the Manchester Transactions*, and to examine the investigations of Professor Leslie, (*Relations of Heat and Moisture*, and *Supplement to the Encyclopædia Britannica, Article* METEOROLOGY;) of Dr. Anderson (*Edinburgh Encyclopædia, Article* HYGROMETER,) and of M. Gay-Lussac, (*Biot, Traité de Physique, tom* ii.) A good series of observations at high temperatures will be found recorded in Nos. II. and III. of a Calcutta Journal, entitled *Gleanings in Science.*

VI. That experiments *on the Decrease of Temperature at increasing heights in the Atmosphere* be recommended as an important subject for the contributions of observers.

Note. Series of observations for considerable periods of time on the mean temperature of the air at fixed hours, and at stations of which the difference of height has been accurately measured, are the most valuable. The best hours for observation are those which give most accurately the mean temperature of the period of observation. The hourly observations at Leith Fort have determined the hours which give the annual mean temperature in this country to be about 9¼ A.M. and 8½ P.M. Experimental balloons have lately been employed to assist the solution of this problem, which is one of the most interesting in Meteorology; but the investigation of it is nearly brought to a stand for want of sufficiently numerous observations. The observer may be referred for information to Ramond, *Mémoires sur la Formule Barometrique de la Méchanique Céleste;* to the Researches of Humboldt; to Professor Leslie, *Supplement to the Encyclopædia Britannica, Article* CLIMATE; to Pouillet, *Elemens de Physique;* to Mr. Atkinson's Paper on Refractions in the *Memoirs of the Astronomical Society;* and to Mr. Ivory's Memoir on the same subject in *the Philosophical Transactions*, and his Papers in *the Annals of Philosophy.*

VII. That the observation of *the Temperature of Springs at different heights and depths* should be pointed out as an object of great interest, in prosecuting which insulated inquirers may render essential aid to science.

Note. When springs are copious, a few observations in the course of the year suffice to give with great accuracy their mean temperature. The height of the springs above the mean level of the sea, and the depth of Artesian wells, should be carefully observed; and where the corresponding mean temperature of the air can be obtained, it should be stated. In two points of view these observations are important, independently of the inferences which they may furnish as to the decrease of heat in the atmosphere. The great interest attached to the phænomenon of the progressive increase of temperature of the globe, as we descend through the Strata, renders of value observations on the temperature of springs at considerable heights, of springs in mines, and of these brought to the surface from some depths by the process of boring. This question has been treated with great success by M. CORDIER,

in several Memoirs, some of which have been translated into English. Again, the researches of Humboldt, Buch, Wahlenberg, and most recently Kupffer in a Memoir on *Isogeothermal Lines*, read before the Academy of St. Petersburg, in 1829, have shown that the temperature of the earth differs in many parts of the globe from that of the air, being generally in defect below lat. 56°, and in excess beyond it. The progressive increase of temperature with that of the depth in Artesian wells, and the deviation of the mean temperature of the Earth from that of the Air in different latitudes, have opened new fields for discussion; and by the zealous co-operation of observers cannot fail to present results, of which at present we can form but an imperfect idea.

Magnetism.—It appears to the Committee highly desirable that a series of observations upon the *Intensity of Terrestrial Magnetism in various parts of England* be made by some competent individual, similar to those which have recently been carried on in Scotland by Mr. Dunlop.

Should the Committee succeed in finding some individual ready to undertake the task, they propose that an application should be made to the Royal Society of Edinburgh, for permission to make use of the Standard Needle belonging to them, and constructed under the direction of Professor Hansteen of Christiania.

It appears to the Committee of considerable importance, that a certain number of observations should be made throughout Britain with *the Dipping Needle*, in order to reduce the Horizontal to the true Magnetic-Intensity.

Note The time of three hundred vibrations should be observed, and the methods of observation and reduction should be the same as have been employed and described by Humboldt, Hansteen, and others.

Electro-Magnetism.—The Committee recommend, as an important subject for further prosecution, the examination of the *Electro Magnetic condition of Metalliferous Veins.* The Committee would refer for the details of what has been already done upon this subject, to the Paper of Mr. Fox in the Philosophical Transactions for 1830; and would propose that the experiments should be extended to veins which traverse, as in some of our mines, horizontal and dissimilar strata.

Tides.—M. Daussy has shown, that on the coast of France, between Ouessant and the coast of Spain, the Atmospheric pressure has considerable influence upon the height of the tide: one inch of rise in the mercurial column depresses the tide fourteen inches. He found that the influence of the wind upon the height of high-water is insensible. M. Ludbock has ascertained "that in the river Thames the influence of the fluctuations of the Barometer upon the tide is insensible or very nearly so." He has also found "that the direction of the wind (unless in violent gales) has no effect upon the phænomena of the tides in the river Thames."