

and $d'h't'$ respectively. Then, from any point S on the circumference of the circle, reproject the six points dht , $d'h't'$, upon the same circumference in the points similarly lettered.

By means of this double projection from the centres E and i the points DHT have been transferred in duplicate from the hyperbola to the circle, or from one conic to another of a different species; and it is proved in treatises on modern geometry that points so transferred lose none of their projective properties. Hence the points dht and $d'h't'$ on the circumference of the circle are allied projective systems. Therefore, in order to find the perspective line common to both systems, choose one point t of the first set as the centre of projection of the second system; and make t' , the correlative point of the second set, the centre of projection of the system dht .

From t project the points d' and h' by rays td' and th' , and from t' project the correlative points d and h by rays $t'd$ and $t'h$. Then the correlative rays td' and $t'd$ will intersect in a point d_0 on the required perspective line; and the correlative rays th' and $t'h$ will meet in h_0 , a second point on the same line. This perspective line d_0h_0 will intersect the circumference in two points i_0 and g_0 which, being joined to S and produced, will determine the double points I and g common to the hyperbola and transversal Lz. The complete quadrangle EC'IC shows that the harmonic ratios CziN and g^zIL are segments of the same harmonic pencil P.

The lines Ez and C'z are tangents to the curve at E and C' respectively; and z is the pole of the polar EC' with respect to the hyperbola. The proofs of these last two deductions may be found in any good text-book on geometry of position.

ROBERT H. GRAHAM.

Thought and Breathing.

PROF. MAX MÜLLER's article on thought and breathing, in your issue of February 6 (p. 317) has just come into my hands. In it he states that the power of retaining the breath is practised largely by Hindus as a means towards a higher object, viz. the abstraction of the organs of the human body from their natural functions. The same custom prevails amongst a certain sect of Mahometans also—the so-called Softas.

In 1878, when in the Central Provinces of India, I came across a native Christian—Softa Ali, as he was called—who had a history. His father had been a Cazi—or religious judge—and a wealthy man, who through scruples of conscience fell into disgrace with a certain native ruler, lost his all, and was banished. His son was, or became, a Softa, and after some years embraced Christianity from conviction, and at great cost to himself—for his wife and children would no longer consort with him. When describing to me the practices formerly enjoined upon him by his religion, this man stated that a Softa is required to draw in and retain his breath and respire it again in various manners. He did not give full details as to how this should be effected, but said that the object of this procedure was to worship with every organ of one's body—heart, lungs, &c., in turn. He added that this practice was a fruitful source of heart-disease.

The following year, when staying at Futtehpore Sikri, near Agra, I saw and heard a Mahometan, unknown to himself, make his evening devotions near the tomb of Suleem Chisti in the way above described; his movements, and the sounds he uttered, were most peculiar.

It has been often related, from well-attested evidence, that in the case of those who have been recovered from drowning, or of those who have been hung and cut down before life was extinct, a kind of automatic consciousness seems to be extraordinarily active in them at the time of their peril. It would appear that, as regards Hindu and Mahometan devotees, and the drowning or partially hung man, a kind of asphyxia is the result, and that, when sensation is almost gone, the intelligence acquires increased activity. In our ordinary life, if our minds are intently fixed upon a subject, we instinctively and involuntarily retain the breath.

When in Rajputana, and again when on the frontier of Chinese Tibet, I saw in each place a man who, to all appearance, seemed to have attained the power of perfect abstraction. In the former case, the villagers asserted that the devotee rose only once a week from his most uncomfortable and constrained position; in the second instance, the man—a most singular-looking person—remained absolutely immovable the whole day. Both seemed to be in a kind of cataleptic trance.

HARRIET G. M. MURRAY-AYNSLEY.

Former Glacial Periods.

I HAVE long felt convinced that geologists are being misled in reference to former glacial epochs by failing to give due thought to a consideration referred to on former occasions,¹ viz. that when the present surface of the globe has been disintegrated, washed into the sea, and transformed into rock, there will undoubtedly then be about as little evidence that there had been a glacial epoch during post-Tertiary times as there is at present that there was one during Miocene, Eocene, Permian, and other periods.

JAMES CROLL.

Perth, March 6.

AUSTRALASIAN ASSOCIATION FOR THE ADVANCEMENT OF SCIENCE.

THE formation of this Association, mainly by the efforts of Prof. Liversidge, of Sydney University, and its first meeting in Sydney in August 1888, were noticed at the time in NATURE (vol. xxxviii. pp. 437, 623). One of the chief rules of the Association is that it shall meet in turn in the capital cities of the various colonies; and Melbourne was agreed upon as the second meeting-place. It was found inconvenient, however, to hold the Melbourne meeting during 1889, as should have happened in due course, for it is only after Christmas that all the Universities are simultaneously in vacation; and accordingly it was commenced on the 7th of January in the present year, and was continued through the following week. Some anxiety was felt as to the result of this choice of date, for there is always a risk in January of such continuous heat as would hinder the work and destroy the pleasure of the meeting; but the Association proved to be specially favoured in the matter of weather.

The following are the names of the officers of the Association and of the Sections. With regard to the latter, the rule obtains that Presidents are chosen from other colonies, while Vice-Presidents and Secretaries are chosen from the colony in which the meeting is held.

President, Baron von Mueller, K.C.M.G., F.R.S.

Local Treasurer, R. L. J. Ellery, C.M.G., F.R.S.

General Secretaries: Prof. Archd. Liversidge, F.R.S., Permanent Hon. Secretary; Prof. W. Baldwin Spencer, Hon. Sec. for Victoria.

Assistant Secretary for Victoria, J. Steele Robertson.

Sectional Officers:—Section A (Astronomy, Mathematics, Physics, and Mechanics)—President, Prof. Threlfall, Sydney University. Vice-President, Prof. Lyle, Melbourne University. Secretaries: W. Sutherland, E. F. J. Love.

Section B (Chemistry and Mineralogy)—President, Prof. Rennie, Adelaide University. Vice-President, C. R. Blackett, Government Analyst, Melbourne. Secretary, Prof. Orme Masson, Melbourne University.

Section C (Geology and Palæontology)—President, Prof. Hutton, Canterbury College, New Zealand. Vice-President, Prof. McCoy, C.M.G., F.R.S., Melbourne University. Secretary, James Sterling.

Section D (Biology)—President, Prof. A. P. Thomas, Auckland. Vice-Presidents: J. Bracebridge Wilson; P. H. MacGillivray. Secretaries: C. A. Topp, Arthur Dendy.

Section E (Geography)—President, W. H. Miskin, President of the Queensland Branch of the Royal Geographical Society of Australasia. Vice-Presidents: Commander Crawford Pasco, R.N.; A. C. Macdonald. Secretary, G. S. Griffiths.

Section F (Economic and Social Science and Statistics)—President, R. M. Johnson, Registrar-General, Hobart. Vice-President, Prof. Elkington, Melbourne University. Secretaries: A. Sutherland, H. K. Rusden.

Section G (Anthropology)—President, Hon. J. Forrest, C.M.G., Commissioner for Crown Lands, Western

¹ Quart. Journ. Geol. Soc. for May 1889; "Climate and Time," p. 266.