we experienced on both those occasions. In the case of Bessel, his was the delight of a son who had found a father. He hung on his words and watched his looks with a mingled feeling of affection and pride. That he profited by studying the writings of these great men, his own researches sufficiently testify. His path lay not in the complex analytical investigations of the French school; but what he professed, he was profoundly acquainted with. His natural modesty appears nowhere to greater advantage than in his sternly disclaiming all pretensions to knowledge with which he was only partially acquainted. In social life he was kind and affectionate; ever ready to assist his friends, without regard to his personal comfort. His naturally reserved manner unfitted him to occupy that position in general society which his extensive information and accurate memory amply qualified him for. He felt, too, what his position, as Her Majesty's Astronomer for Scotland, demanded, and having no facility of adapting himself to the peculiarities of others, he was content to limit his circle to a few chosen friends. Amongst these he never forgot his early patrons, towards whom he manifested to the last the same deep feelings of gratitude. By them, and by all who knew him intimately, he was much beloved, and as much respected. They will agree with me in saying that we have lost a valuable friend,—a man liberal and high-minded,—conscientious to a degree,—ready with heart and hand to assist, when assistance was called for,—with a judgment so sound, and experience so improved, as to render him a safe adviser, and an invaluable coadjutor. May the reputation he has left, and the kind remembrances which his friends cherish of him, stimulate us to follow his example, and imitate his virtues.

3. On the Chemical Relations of Creosote. By WILLIAM GREGORY, M.D., Professor of Chemistry.

The author stated, that, being struck with the singular resemblance between the properties of creosote and those of carbolic acid, as described in all chemical works, he had tried the action of a mixture of chlorate of potash and hydrochloric acid on creosote, and had thus obtained a very large proportion of chloranile, the compound yielded by carbolic acid, when treated in the same way. He had also obtained, by the action of nitric acid on creosote, evidence of the production of nitropicric acid, which is also obtained from carbolic acid.

He drew the conclusion, that if these two compounds be not identical, they are, at least, very closely connected, and in all probability, contain the same radical. It is possible that creosote may be a definite compound of carbolic acid with some allied body. At all events, it is very remarkable, that these two compounds, described as different, should agree in density, taste, smell, antiseptic property, power of combining with bases, power of dissolving resins, indigo, &c., and finally in composition; although probably perfectly pure creosote has not yet been analysed.

The author mentioned these results very briefly, having discovered, just before the meeting, that he had been anticipated in his experiments on creosote, by M. Laurent, who had obtained the same results, and drawn very nearly the same conclusions, in a very recent paper, and who was therefore entitled to priority in the matter.

4. On the Thermometric Correction of Magnetic Instruments.

By J. A. BROWN, Esq.

Mr Brown points out the defects of the usual methods of ascertaining the corrections for temperature, applicable to magnetic instruments generally, and the vertical force magnetometer in particular. The usual methods depend upon the knowledge of the time of vibration, or upon the statical deflection produced by a neighbouring magnet, under differing circumstances of temperature. Mr Brown shews that both these methods are liable to great objection; and he has succeeded by arranging the ordinary hourly observations of the instruments in groups, in obtaining consistent results for the temperature correction by a process of elimination.

5. On the Constitution of Bebeerine. By DOUGLAS MACLAGAN, M.D., F.R.S.E., and THOMAS G. TILLEY, Esq., Birmingham.

Bebeerine is a vegetable alkaloid, discovered by Dr Rodie of Demerara, in the bark of the Bebeeru tree, *Nectandra Rodiei*, Schomburgk. The properties of the alkaloid and its application in the form of sulphate, in the treatment of disease, were formerly described by Dr MacLagan in a paper read before the Society, and published in their Transactions, vol. xv., part 3.