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.

As bebeerine does not crystallize, and is coloured, its purity could only be ascertained by analysis. The authors describe a new method of purification, in which oxide of lead is employed to separate tannin, &c.

The mean results of the analysis performed, were as follows :—

Carbon,	.	.	.	.	.	71.92
Hydrogen,	.	.	.	.	.	6.49
Nitrogen,	.	.	.	.	.	4.75
Oxygen,	.	.	.	.	.	16.84
						<hr/>
						100.00

The mean atomic weight, as deduced from the analysis of the double salt of hydrochlorate of bebeerine, with bichloride of platinum, is 3756.77 (oxygen=100), and, making this the groundwork of the calculation, the authors were led to the formula $C_{35}H_{40}N_2O_6$ for bebeerine, which gives the atomic weight 3681.38.

It is remarkable that this formula is the same as that generally admitted for morphia, and not, as might be expected from the action of bebeerine, allied to those of quinine and cinchonine. The mode of arrangement of the atoms is, no doubt, different in morphine and in bebeerine, notwithstanding the apparent identity of proportions. In fact, the difference of physical properties proves a difference in the grouping of the atoms.

The authors were not able to obtain sipeerine, the substance which accompanies bebeerine, in sufficient quantity for analysis. It appears to be also an alkaloid.

The following Candidate was duly elected a Fellow of the Society :—

Professor LEWIS GORDON of Glasgow.

The following Donations were presented :—

Journal of the Statistical Society of London. Vol. VIII.—Part 1.

—*By the Society.*

The Electrical Magazine. Conducted by Mr Charles V. Walker.

—Vol. 1. No. 8.—*By the Editor.*

- Memoir of Francis Baily, Esq., D.C.L. Oxford and Dublin.—By
 Sir John F. W. Herschel, Bart.—*By the Author.*
- Bulletin de la Société de Géographie. (Deuxième Série.) Tomes
 xvi., xvii., xviii.—*By the Society.*
- Comptes Rendus Hebdomadaires des Séances de l'Académie des
 Sciences. Tome xix. Nos. 17–27. Tome xx. No. 1–11.—
By the Academy.