

perspective.—Prof. Blackie read a paper on the most recent phases of Greek literary style. The style of the educated Greek and the popular style were brought into closer correspondence than previously at the commencement of the present century, chiefly through the influence of Coraes. In this paper Prof. Blackie investigates the result of that amalgamation. Since 1830, the development of the Greek language has been most marked. The higher classical style has been constantly gaining ground, so that popular and literary Greek now differs as little from ancient classical Greek as Scotch does from English; while, previous to the time of Coraes, they were as distinct as present-day English is from the English of Chaucer. The author gives examples of the deviations of the literary and popular Greek of various epochs from ancient Greek, which prove a rapid return to the ancient purity of language. Thus, while in twelve lines of Romaic Greek eighteen or twenty deviations from the pure style may be found, in twelve lines of modern Greek only two or three such deviations appear. In the first five verses of the second chapter of Luke, nineteen deviations occur in the Romaic New Testament, while in the same passage in the English Bible Society's version of 1890 only four are found. In two pages of a recent number of a Greek newspaper only two deviations occur.—Dr. Berry Haycraft communicated a contribution, by Mr. F. E. Beddard, to the anatomy of *Sutroa*

## PARIS.

Academy of Sciences, April 19.—M. d'Abbadie in the chair.—Calculation of the diminution which is experienced by the mean pressure on a fixed horizontal plane, in the interior of a heavy liquid filling a basin and agitated by certain wave motions, by M. J. Boussinesq.—Note by M. Faye accompanying the presentation of celestial photographs obtained at Heidelberg by Dr. Max Wolf, Director of the Observatory. The photographs commented upon by M. Faye are those recently taken of a part of Cygnus, and that on which the trail of a new asteroid was detected; also a picture showing a shooting-star which crossed the field of observation during exposure. The photographs were taken by means of a portrait-lens  $2\frac{1}{2}$  inches in diameter.—On the optical measure of high temperatures, by M. A. Crova.—Researches on the formation of planets and satellites: memoir by M. E. Roger, presented by M. Jordan. The author has developed a complex relation connecting the distances of planets from the sun, and also one connecting the distances of planets from their satellites.—Observations of Swift's comet (1892 March 6), made with the Brunner equatorial of Lyons Observatory, by M. G. Le Cadet. Observations for position were made on April 3, 4, 8, 9, 11, and 15.—On differential invariants of a surface with respect to conformable transformations of space, by M. Arthur Tresse.—On the accuracy of comparisons of a *mètre à bouts* with a *mètre à traits*, by M. Bosscha.—Researches on the secondary wood of Apetales, by M. C. Houbert.—On the relations existing between the form and nature of the beds of andalusite at Ariège, by M. A. Lacroix. It appears that at Ariège the form of the andalusite is characteristic in each bed to such an extent that, given a geological map of the region, it is possible to indicate *a priori* where the mineral would be found, and conversely, given a specimen of andalusite, the geological nature of the bed from which it was taken could be stated with very little chance of error. The facts described by M. Lacroix are thus as useful to the geologist as to the mineralogist.—On the loess of Turkestan, by M. Guillaume Capus.

## BRUSSELS.

Academy of Sciences, March 5.—The following communications were read:—The male of certain Caligides, and a new species of this family, by M. P. J. Van Beneden. The author describes (1) the male of *Pandarus Cranchii*; (2) the male and female *Pandarus affinis*, n. sp.; (3) a new species, *Chlamys incisus*; and (4) the male of *Dinematoura elongata*.—Theoretical determination of the radius of the sphere of molecular activity of liquids in general, by M. P. De Heen. The conclusion is arrived at that the radius of the sphere of activity is proportional to the product of surface tension into molecular volume.—On the curve in conic sections, by M. Cl. Servais.—Researches on the physiology of respiratory centres, by Dr. Alfred Bienfait. The author adduces evidence to show that a single respiratory centre, isolated by two transverse sections from the accessory respiratory centres, controls the movements of the glottis.—On a new ptomaine obtained by the culture of

*Bacterium Allii*, by Dr. A. B. Griffiths. In a former paper Dr. Griffiths described and named *Bacterium Allii*—a micro-organism found by him. This Bacteria produces a green pigment, soluble in alcohol, and possessing a particular absorption spectrum. In the presence of albuminoids, *Bacterium Allii* gives rise to a crystallizable ptomaine, which furnishes a chloroplatinate, having the formula, according to analyses,  $(C_{10}H_{17}NHC1)Pt_2Cl_4$ . The analysis of the base gave the formula  $C_{10}H_{17}N$ , which corresponds to that of chloroplatinate.

## BOOKS, PAMPHLETS, and SERIALS RECEIVED.

BOOKS.—The Apodidæ: H. M. Bernard (Macmillan).—Tanganyika: E. C. Hore (Stanf rd).—Epidemics, Plagues, and Fevers: Hon. Rollo Russell (Stanf rd).—Hand-book of Jamaica, 1892 (Stanford).—A Treatise on Physical Optics: A. B. Basset (Bell).—The Landfall of Lief Erikson, A.D. 1000: E. N. Horsf rd (Boston, Damrell and Upham).—A Guide to Electric Lighting: S. Bottono (Whittaker).—Elementary Lessons in Heat: S. E. Tiltman, 2nd edition (Gay and Bird).—Les Altérations de la Personnalité: A. Binet (Paris, Alcan).—Thermodynamische Studien: J. W. Gibbs, translated by W. Ostwald (Leipzig, Engelmann).—English Botany: supplement to the 3rd edition, Part 1: N. E. Brown (Bell).—Progressive Mathematical Exercises, 2nd series: A. T. Richardson (Macmillan).  
PAMPHLET.—The Wheat Plant, how it Feeds and Grows: W. Carruthers (also 8 diagrams) (W. and A. K. Johnston).  
SERIALS.—Proceedings of the Rochester Academy of Science, vol. i. Brochures 1 and 2 (Rochester, N. Y.).—Brain, Part 57 (Macmillan).—Journal of the Bombay Natural History Society, No. 4. vol. vi. (Bombay).—Journal of the Institution of Electrical Engineers, No. 97, vol. xxi. (Spon).—Bulletin of the New York Mathematical Society, vol. i. No. 7. (New York).—Physical Society of London, Proceedings, vol. xi. Part 3 (Taylor and Francis).—Proceedings of the Geologists' Association, vol. xii. Part 7 (Stanford).—Journal of the Royal Microscopical Society, April (Williams and Norgate).—A Manual of Orchidaceous Plants, Part 8 (Veitch).—Notes from the Leyden Museum, vol. xiv. Nos. 1 and 2 (Leyden, Brill).—American Journal of Mathematics, vol. xiv. No. 2 (Baltimore).—Transactions of the Royal Society of Victoria, vol. ii. Part 2, 1891 (Melbourne).—Report of the Geological Survey of India, vol. xxv. Part 1 (Calcutta).

## CONTENTS.

PAGE

Theoretical Chemistry. By Prof. M. M. Pattison Muir	601
The Travels of a Painter of Flowers. By W. B. H.	602
American Town Trees . . . . .	603
Our Book Shelf:—	
Briggs: "Synopsis of Non-Metallic Chemistry" . . . . .	604
Whiteley: "Chemical Calculations" . . . . .	604
Bonney: "The Year-book of Science" . . . . .	604
"Handy Atlas of Modern Geography" . . . . .	605
Letters to the Editor:—	
Aurora.—Geo. M. Seabroke; Arthur Marshall; Arthur E. Brown . . . . .	605
Pigments of Lepidoptera.—F. H. Perry Coste; Prof. R. Meldola, F.R.S. . . . .	605
Eozoon.—Sir J. William Dawson, F.R.S. . . . .	606
The Theory of Solutions.—Prof. W. Ostwald . . . . .	606
Physiological Action of Diminished Atmospheric Pressure.—F. R. Mallet . . . . .	606
Sensitive Water Jets.—W. B. Croft . . . . .	606
Double Orange.—Gerald B. Francis . . . . .	607
On the Line Spectra of the Elements. By Prof. C. Runge . . . . .	607
Aberrant Fossil Ungulates of South America. By R. L. . . . .	608
The Changefulness of Temperature as an Element of Climate. By H. F. B. . . . .	610
Forestry in America. By Prof. W. R. Fisher . . . . .	611
Notes . . . . .	612
Our Astronomical Column:—	
Spectrum of Nova Aurigæ . . . . .	616
Photographs of the Region of Nova Cygni . . . . .	617
Winnecke's Comet . . . . .	617
Personal Equations in Transit Observations . . . . .	617
The Sirius System . . . . .	617
The Ancient Civilization of Central America. (With Map.) By Alfred P. Maudslay . . . . .	617
University and Educational Intelligence . . . . .	622
Scientific Serials . . . . .	622
Societies and Academies . . . . .	623
Books, Pamphlets, and Serials Received . . . . .	624