

new compound, whose formula is  $2\text{NH}_3\text{Cu}_3\text{I}_2$ , as shown by the following figures:—

	Found		Theory
Copper	24.66	24.61	24.84
Iodine	66.03	65.91	66.27
Ammonia	8.58	8.66	8.88

—On the synthesis of an inactive terpenol, by MM. G. Bouchardat and J. Lafont.—Action of anhydrous baryta on methylic alcohol, by M. de Forcrand. From the author's experiments it follows that whenever the solution of baryta takes place in methylic alcohol in the presence of a trace of water, which it is very difficult to avoid, the resulting compound should be  $\text{C}_8\text{H}_{14}\text{O}_2, \text{BaO}, \text{H}_2\text{O}_2$ .—Action of heat on the acetones, by MM. P. Barbier and L. Roux. The paper deals fully with the mode of decomposition which these substances undergo when subjected to the influence of red heat.—Decomposition of pilocarpine, by MM. E. Hardy and G. Calmels.—Researches on the development of beetroot, by M. Aimé Girard. Here the author studies more especially the tap-root and radicles, concluding that the saccharine matter is formed, not in the underground, but exclusively in the overground parts of the plant.—On the functions of the ovoid gland, of Tiedemann's bodies, and Poli's vesicles in the Asteridæ, by M. Cuénot.—On the conjunctions of the ciliated Infusoria (*Colpidium colpoda*, *Paramæcium aurelia*, and *Euploes patella*), by M. E. Maupas.—On the classification of the Thaliaceæ and some other groups of Ascidians, by M. F. Lahille.—Note on the *Amphistegina* of Porto Grande, St. Vincent Island, by M. de Folin.—On the functions of the cephalic fossettes in the Nemertæ, by M. Remy Saint-Loup.—Researches relative to the influence of the nerves on the production of lymph, by M. Serge Lewachew.—On the anatomic constitution of the Ascidians attached to the rare American plant *Heliamphora nutans*, Benth., by M. Ed. Heckel.—On the presence of a line of erratic boulders stranded on the coast of Normandy, by M. Ch. Vélain.—On the eruption of Etna during the months of May and June, by M. H. Silvestri. The discharge during twenty days of activity has been approximately estimated at 66,000,000 cubic metres.

BERLIN

**Physiological Society, May 28.**—Dr. Virchow made a report of his investigations into the capillaries of the vitreous body and their environment. The vitreous body, which must no longer be regarded as a tissue, but as an organ, showed different structural relations among the different groups of animals, and, in the case of fishes and the frog, was distinguished by its strong bounding cuticle, on which the capillaries formed an object of interesting examination. In regard to the structure of the capillaries the speaker had come to the conviction that they consisted of a fundamental membrane which was occupied with cells. The environment of the capillaries formed lymph-spaces, which had not yet, however, manifested themselves as standing in continuous connection with one another. On the cuticles inclosing the lymph-spaces lay cells displaying a great multiplicity in form and arrangement among the different kinds that had been examined.—Prof. Munk attacked the position taken up at the last sitting of the Society by Prof. Christiani respecting the possibility of seeing after excision of the greater brain. He challenged his opponent to show to the Society or the Association of Naturalists for this year a rabbit that was able to see after the removal of the greater brain.—Dr. Benda exhibited a series of preparations of the central nervous system which were coloured in accordance with the hæmatoxyline method as modified by him. There were in particular three advantages distinguishing his hæmatoxyline colouring from that of Weigert's: (1) the axial cylinders of the nerve fibres in the brain came out more distinctly, and their connection with the ganglia cells was directly demonstrated. (2) The structure of the ganglia came out more distinctly. In the case of those ganglia which remained clear after the hæmatoxyline colouring, there appeared with great constancy in the fibrous framework, dark concretions, which might perhaps be interpreted as a special structure, though the speaker was not yet prepared to decisively maintain that assumption as fact. (3) With still more reservation would he present the third result, which came to light in a particular structure of the medullary sheath. On the transverse section radiate drawings were seen to proceed from the axis cylinder towards the neurilemma. These markings ramified,

and perhaps formed the protoplasmatic scaffold within which was deposited the fluid nerve-medulla. The speaker next described more minutely his method of proceeding—hardening with picric acid, washing out with alcohol, laying in paraffin, treating with a sulphate of iron, colouring with hæmatoxyline, washing out with solution of alum or with a diluted acid. In conclusion Dr. Benda gave a theory of hæmatoxyline colouring, which ranged itself close in order with the colouring with logwood customary in technics. In both cases the colouring-matter was applied as lac, the tissue being first saturated with the mordant, and then impregnated with the colouring-matter, which formed in the tissue lacs insoluble in water and alcohol, and only in part capable of being resolved through washing out with the mordants or with acids. Or the colouring-matter might be used in the way of ink, which formed precipitates with the tissues.

BOOKS AND PAMPHLETS RECEIVED

"Annual Report of the Smithsonian Institution for the Year 1884" (Washington).—"The Gothic of Ulfilas," by T. le M. Dowse (Taylor and Francis).—"Recherches pour établir ses Rapports avec la Côte de France," by Prince A. de Monaco (Gauthier-Villars, Paris).—"Monthly and Yearly Means, Extremes and Sums for the Years 1883, 1884, 1885" (Tokio).—"Aus dem Archiv der Deutschen Seewarte," 7 Jahrgang, 1884 (Hamburg).—"Reichenbachia, Orchids Illustrated and Described," part 1, May, by F. Sander (Sander and Co., St. Albans).—"Encyclopædie der Naturwissenschaften," Erste Abth. 45, 46, und 47, Lief.; Zweite Abth. 34, 35, und 36, Lief. (Trewendt, Breslau).—"Mémoires du Comité Géologique, St. Petersburg," vol. ii. No. 3.—"Bulletins du Comité Géologique, St. Petersburg," v. Nos. 1 to 6.—"Bibliothèque Géologique de la Russie," i., 1885.—"Physiological Laboratory Notes," by S. W. Holman (Cushing, Boston).—"Annotated Catalogue of the Published Writings of Chas. A. White," by J. B. Marcow (Washington).

CONTENTS

PAGE

<b>The Etiology of Scarlet Fever</b> . . . . .	213
<b>Oils and Varnishes.</b> By Prof. R. Meldola, F.R.S. . . . .	213
<b>Hartlaub on the Manatees</b> . . . . .	214
<b>Our Book Shelf:—</b>	
Hale's "Infant-School Management" . . . . .	215
Dent's "Year in Brazil" . . . . .	215
Walsh's "Colloquial Faculty for Languages" . . . . .	216
<b>Letters to the Editor:—</b>	
Periodicity of Glacial Epochs.—Adolphe d'Assier . . . . .	216
Evidence of Man and Pleistocene Animals in North Wales prior to Glacial Deposits.—Henry Hicks, F.R.S. . . . .	216
Ampère's Rule.—H. G. Madan . . . . .	217
Halos.—J. H. A. Jenner . . . . .	217
The Microscope as a Refractometer.—Rev. Gordon Thompson . . . . .	217
The Bagshot Beds.—Rev. A. Irving . . . . .	217
The Enemies of the Frog.—T. Martyr . . . . .	217
Hybrids between the Black Grouse and the Pheasant.—Dr. A. B. Meyer . . . . .	218
<b>The Finsbury Technical College Conversazione</b> . . . . .	218
<b>The Recent Discoveries at Tiryns.</b> ( <i>Illustrated</i> ) . . . . .	218
<b>On Variations of the Climate in the Course of Time, I.</b> By Prof. A. Blytt . . . . .	220
<b>Hypertrichosis.</b> By Dr. J. Jenner Weir . . . . .	223
<b>Notes</b> . . . . .	224
<b>Our Astronomical Column:—</b>	
Method of Correcting for Differential Refraction in Declination . . . . .	225
A New Minor Planet . . . . .	225
<b>Astronomical Phenomena for the Week 1886 July 11-17</b> . . . . .	225
<b>Geographical Notes</b> . . . . .	226
<b>The Sun and Stars, VIII.</b> By J. Norman Lockyer, F.R.S. ( <i>Illustrated</i> ) . . . . .	227
<b>Flame Contact, a New Departure in Water Heating.</b> By Thomas Fletcher . . . . .	230
<b>The Craters of Mokuaweoweo, on Mauna Loa.</b> By J. M. Alexander . . . . .	232
<b>Immisch's Thermometer.</b> ( <i>Illustrated</i> ) . . . . .	234
<b>Scientific Serials</b> . . . . .	234
<b>Societies and Academies</b> . . . . .	235
<b>Books and Pamphlets Received</b> . . . . .	236