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THE AMERICAN ASSOCIATION FOR THE ADVANCEMENT OF SCIENCE

SECTION E—GEOLOGY AND GEOGRAPHY

IN spite of the fact that Section E held a summer field meeting¹ at Plattsburg, N. Y., during the week of July 3 last, the interest of its members in the winter meeting showed no abatement. A large number of its geological members attended the meeting of the Geological Society of America at Albuquerque, and consequently there was not a large attendance of those whose special interest is geology. But, on the other hand, the Association of American Geographers met in Chicago at the same time as Section E, and this attracted a large number of geographers, many of whom are members of the section.

Immediately after the general session of the association, the Association of American Geographers and Section E held a joint meeting for the purpose of arranging the program, after which the two organizations separated. The geological members of the section held six sessions in the Walker Museum, University of Chicago, during Tuesday, Wednesday and Thursday, with the vice-president of the section presiding, and the geographical members met with the American Geographers, except during the early portion of Wednesday afternoon, when the entire section met to listen to Professor Chamberlin's paper on the influence of the tides.

At the first meeting of the section Pro-

¹ An account of the summer meeting is printed in SCIENCE, No. 665, pp. 397-404, Sept. 27, 1907.

band of fibers (pons Varolii)" (p. 203). "The two lateral lobes of the cerebellum are connected by a large commissure, the pons Varolii; this extends round the medulla oblongata ventrally and is more largely developed the higher we pass in the mammalian series" (p. 229). From this and from the subjoined "diagram of the chief systems of fibers of the human brain" there would be gained the impression that the pontile⁴ fibers all cross from one cerebellar hemisphere to the other, whereas at least an equal number decussate and either end in pontile cinerea or become deflected to a sagittal direction. In further diminishment of the usefulness of this figure to the uninformed, the fibrous connections of the cerebellum are called "crura" in the description but "peduncles" in the text. Granting, however, that histology is subordinate in a work of this kind, are macroscopic features of the part in question more satisfactorily dealt with? In Fig. 171, the dog's brain, the area corresponding with the pons is fairly well defined, but the line shading gives the impression of a longitudinal direction of the fibers. On the preceding page the figure of the rabbit's brain embodies not only a *suppressio veri*, but a *suggestio falsi*. There is not the least indication of a pons; on the contrary, the mesal furrow is even more marked than in the pons-less bird on the opposite page, and at either side is a longitudinal line as if the lateral margin of an "anterior pyramid." This same figure occurs in former German and English editions, and in the author's "The Structure of Man," with no intimation of its defects; it is also reproduced in both the "Text-book" and the "Manual" of T. J. Parker and Haswell, although correct—if less artistic—pictures of the rabbit's brain are given in T. J. Parker's "Zootomy" and other elementary treatises. The repetition of such a travesty is susceptible of three explanations, viz., either (a) the author and

the adapter are unaware of the existence of the pons in the rabbit, or (b) they have overlooked its omission by the artist, or (c) they are indifferent to the just claims of the student for reliable information upon a feature that distinguishes the mammals from all other vertebrates.

The extensive and well-arranged bibliography of the previous edition has evidently been augmented and probably embraces the six hundred additional titles of the last German edition; but there are signs of carelessness in, *e. g.*, the inclusion in the literature of the brain of mammals (p. 528, fifth from foot) of a title referring exclusively to the amphibian brain.

An inserted slip disposes of twenty-six errata. As indexes go, perhaps this volume is not conspicuously deficient; yet probably the following are not all the omissions that might be found: appendix (vermiformis), 311; bends (flexures) of the brain, 204; callosal fissure, 225; central lobe, 227; central sulcus, 228; chromophilous and chromophobic, Fig. 151; chromaffin, 495, 496 and 247; cirri, 312; cortex and olfactory cortex, 220; cruciate sulcus, 228; crura cerebelli, 229; diacœle, 210; flexures of the brain, 204; hippocampal fissure, 225; insula (central lobe), 227; mantle, 200; mesocœle, metacœle and myelocœle, 210; ossa mentalia, 135; paracœle, 210; peduncles of cerebellum, 229; pineal cushion, 201; piriform lobe, 228; postcaval and precaval, 426; rhinal fissure, 225; telocœle, 210; thorax, form of, 70; Zirbelpolster, Fig. 150; about thirty, far too many for either a text-book or a work of reference.

Notwithstanding the deficiencies above enumerated, the present is the best English treatise upon vertebrate anatomy, as the original is the best German. The reviewer sincerely hopes to greet a later faultless edition.

BURT G. WILDER

⁴This is the regular English form (Anglo-paronym) of the Latin *pontilis*, the only correct adjective from *pons*; yet certain medical and scientific writers persist in using *pontal*, *pontial*, *pontic*, *pontine* and *pontinal*.

SCIENTIFIC JOURNALS AND ARTICLES

THE April number (volume 9, number 2) of the *Transactions of the American Mathematical Society* contains the following papers:

L. E. DICKSON: "Representations of the general symmetric group as linear groups in finite and infinite fields."

L. P. EISENHART: "Surfaces with isothermal representation of their lines of curvature and their transformations."

J. L. COOLIDGE: "The equiangular transformations of space."

A. RANUM: "Concerning linear substitutions of finite period with rational coefficients."

R. B. ALLEN: "On hypercomplex number systems belonging to an arbitrary domain of rationality."

G. D. BIRKHOFF: "On the asymptotic character of the solutions of certain linear differential equations containing a parameter."

G. A. MILLER: "On the holomorph of the cyclic group of order p^m ."

E. B. VAN VLECK: "On non-measurable sets of points, with an example."

THE April number (volume 14, number 7) of the *Bulletin of the American Mathematical Society* contains the following papers: "Subjective Geometry," by G. W. Hill; "On Higher Congruences and Modular Invariants," by L. E. Dickson; "Note on Jacobi's Equation in the Calculus of Variations," by Max Mason; "On the Distance from a Point to a Surface," by E. R. Hedrick; "A Geometric Representation of the Galois Field," by L. I. Neikirk; "Concerning the Degree of an Irreducible Linear Homogeneous Group," by W. B. Fite; "On the Lorentzian Transformation and the Radiation from a Moving Electron," by F. R. Sharpe; "Shorter Notices" (Walker's On the Resolution of Higher Singularities of Algebraic Curves into Ordinary Nodes, by H. S. White; K. Bopp's Die Kegelschnitte des Gregorius a St. Vincentio in vergleichender Bearbeitung, by F. Cajori; Annuaire du Bureau des Longitudes pour L'An 1908, by E. W. Brown; Kuenen's Die Zustandsgleichung der Gase und Flüssigkeiten und die Kontinuitätstheorie, by E. B. Wilson); "Notes"; "New Publications."

The May number of the *Bulletin* contains: Report of the February Meeting of the American Mathematical Society, by F. N. Cole; Report of the February meeting of the San Francisco Section, by W. A. Manning; "A Fundamental Invariant of the Discontinuous

ζ -Groups Defined by the Normal Curves of Order n in a Space of n Dimensions," by J. W. Young; "On Certain Constants Analogous to Fourier's Constants," by C. N. Moore; "Note on the Second Variation in an Isoperimetric Problem," by E. Swift; "Note on a Certain Equation Involving the Function $E(x)$," by R. D. Carmichael; "The Inner Force of a Moving Electron," by F. R. Sharpe; "The Recently Discovered Manuscript of Archimedes," by C. S. Slichter; "Shorter Notices" (P. H. Schoute's Mehrdimensionale Geometrie, II. Teil, Die Polytope, by W. B. Carver; Field's Theory of the Algebraic Functions of a Complex Variable, by J. I. Hutchinson); "Notes"; "New Publications."

SOCIETIES AND ACADEMIES

BOSTON SOCIETY OF MEDICAL SCIENCES

A MEETING was held at the Harvard Medical School on March 17, Professor H. C. Ernst presiding. The following papers were presented:

A Note on a New Thermochemical Method:

Dr. L. J. HENDERSON and C. T. RYDER.

By introducing a reaction mixture into a Dewar flask which is immersed in a very accurately regulated water thermostat, it is possible to obtain very accurate measurements of heats of reaction of slowly progressing reactions. It has been found that in such a system Newton's law holds very accurately, and that the correction thus involved, with proper manipulation, is very small.

A Series of Ninety-one Blood-cultures: Dr. LAWRENCE J. RHEA.

An Intracanalicular Papillary Adeno-fibroma from the Groin, with lantern illustrations: Mr. E. L. YOUNG.

The Theory of Neutrality Regulation in the Animal Organism: Dr. L. J. HENDERSON.

By analysis of the equilibrium between the four substances carbonic acid, sodium bicarbonate, mono-sodium phosphate and di-sodium phosphate, with the aid of the concentration law, it may be shown that previous findings concerning the constitution of such systems are in accord with the theory. Curves have