SCIENCE

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MSS. intended for publication and books, etc., intended for review should be sent to the Editor of SCIENCE, Garrison-on-Hudson, N. Y

AMERICAN ASSOCIATION FOR THE ADVANCEMENT OF SCIENCE. SECTION I, SOCIAL AND ECONOMIC SCIENCE.

THE St. Louis program comprised four regular sessions, in addition to that of the delivery of the retiring vice-president's address by Mr. H. T. Newcomb, on 'Some Recent Phases of the Labor Problem' (SCIENCE, January 8, 1904). This address was made the basis of discussion at the first regular session, which was occupied with papers and discussions on the labor problem generally. The second session, on economic aspects of the new agriculture, was held jointly with the Society for the Promotion of Agricultural Science. The third session dealt with the status of instruction in social and economic science in schools, colleges and universities; and the fourth included papers on commerce, finance and government. All the sessions were presided over by Hon. Simeon E. Baldwin, of the Yale Law School, New Haven, Conn. The other officers were as follows:

Secretary—John Franklin Crowell.

Councilor—Marcus Benjamin.

Sectional Committee—Simeon E. Baldwin, vice-president, 1904; John Franklin Crowell, secretary, 1904–08; H. T. Newcomb, vice-president, 1903; Frank H. Hitchcock, secretary, 1903; E. L. Corthell (one year), Carroll D. Wright (two years), B. E. Fernow (three years), Frank R. Rutter (four years), Wm. R. Lazenby (five years).

Member of General Committee—Allen Ripley Foote.

The following papers were contributed:

we think that the strength of their position is that the occurrence of many anomalies in the same individual, and especially the occurrence of multiple anomalies in many members of the same family, may fairly be considered marks of degeneration; that in short there is a core of truth in the system, hampered as it is by errors. This in parenthesis. The author then goes on to discuss the various theories to account for the presence of the fossa. This in turn brings up the significance of Kerkring's ossicle, which Le Double declines to consider as representing a part of the proatlas. Here we are once more in the midst of deep questions of embryology and comparative anatomy, and yet we have not finished the squamous portion alone. Later comes a discussion of how many segments the basi-occipital may represent, and whether a subdivision of the anterior condyloid foramen into two, three or even four, results from anything more abstruse than the quasi-accidental ossification of strands of fibrous tissue. There is, as every one knows, much that is interesting in the condyloid region. We could have wished that more had been said of the fusion of the atlas and occiput, but the consideration of this phenomenon was probably beyond the plan of this volume. We must not forget to mention the interesting peculiarities of the inferior surface of the basi-occipital, nor the minute canals sometimes found in its cerebral side.

This may suffice to give some idea of the thoroughness of the work. We must, however, refer the reader to the question of the variations of the pterion, for it serves as an introduction to the author's views. Referring to the process from the squamous portion of the temporal which occasionally reaches the frontal, he writes as follows: "In accord with Gruber, Calori, Virchow, Broca, etc., and in opposition to Anoutchine, Ranke and Schwalbe, I persist in considering the frontal process of the temporal an animal analogy (theromorphie). It does not seem to me necessary, in order to affirm its reversive nature, that this should be the normal arrangement in all the simians. It occurs in a large number of them and in many other animals, which seems to me sufficient; especially as in man it occurs most frequently in what are held the lower races." What makes this announcement doubly interesting is that Professor Le Double is not one of those who call every representation of a condition normal in some animal a reversion. This was one of the mistakes of the cruder days of evolution. On the contrary, he maintains, as we have, that similarity of certain parts is no proof of descent. This is true both when we deal with structures that are normal in a species and when we deal with such as appear exceptionally in individuals. What has long been a crucial point in our mind is whether we are justified in calling a peculiarity a reversion unless we can point out at least a plausible line of descent which shall lead us back to it, and which, moreover, shall not be at variance with the pedigree necessary to account in the same way for other anomalies. To say, as some do, that there is no way of tracing by descent some particular feature through the mammalia and that, therefore, we must call its occasional appearance a reversion to something still earlier is simply to beg the question. If what we have suggested be demanded, it seems that, at present at least, the difficulties presented by the theory of reversion are insuperable. Professor Le Double, judging from the above quotation, would hardly think such a demand justifiable. None the less he very judiciously recognizes other causes.

We do not write, however, for the purpose of discussion. Our object is instead to bring an excellent book to the notice of those interested in the subject. Had it no other merit than that of bringing together the observations that have been made in the last generation, it would be indispensable to anatomists who wish to study the deeper problems.

THOMAS DWIGHT.

HARVARD MEDICAL SCHOOL.

SCIENTIFIC JOURNALS AND ARTICLES.

The Botanical Gazette for January contains the following articles: 'A Morphological Study of *Elodea canadensis*,' by R. B. Wylie, brings out the general facts in regard to floral

development, the growth of the gametophytes, pollination and fertilization. Pollination is largely dependent upon the surface film of water. The functionless pollen tubes swell up into 'cystoids' in the ovarian cavity. These enlargements contain the male structures, still showing themselves as distinct cells instead of nuclei only. Double fertilization occurs and the oospore divides before the endosperm nucleus.—A paper on the 'Chemotropism of Roots,' by F. C. Newcombe and Anna L. Rhodes, records *Lupinus albus* roots as positively chemotropic toward disodium phosphate, no concentration of the salt producing a negative curve. Roots will bend into a solution strong enough to kill them. There is no evidence of osmotropism. Roots of *Cucurbita pepo* exhibit a general indifference to chemicals, showing no chemotropism even toward disodium phosphate.—'A Botanical Survey of the Huron River Valley,' by L. H. Weld, forms a second contribution to the botanical survey of this region undertaken under the direction of Professor Spalding. The paper gives detailed accounts of the soil and vegetation. The author's plan has been to give exact data, so that a comparative study may be made in the future by himself or others. Vegetation is considered largely from the dynamic standpoint.—'Southwestern Plants,' by L. N. Goodding, is a paper describing a number of new species, chiefly from southern Nevada and Utah.—W. C. Coker publishes a series of figures of the sprouting spores of *Equisetum*, showing great variation, and also describes spore distribution in liverworts.—J. B. Farmer explains his views of the quadripolar spindle in the Hepaticæ, in view of the fact that several late papers seemed to attack it.

The contents of *The Journal of Comparative Neurology* for December are as follows:

O. P. Jenkins and A. J. Carlson: 'The Rate of the Nervous Impulse in the Ventral Nerve-Cord of Certain Worms.'

O. S. Strong: 'Notes on the Technique of Weigert's Method for Staining Medullated Nerve Fibers.'

C. Judson Herrick: 'The Doctrine of Nerve Components and some of its Applications.'

B. F. Kingsbury: 'Columella Auris and Nervus Facialis in the Urodela.'

Editorials and reviews.

A monthly journal for teachers of mathematics, entitled 'School Mathematics,' edited by Messrs. George W. Myers and C. E. Lineberger has begun publication. It is a continuation of the mathematical supplement of 'School Science.'

Dr. Toulouse has become editor of the *Revue Scientifique*, the French weekly journal whose scope most nearly corresponds with that of *Nature* and of Science. Dr. Toulouse is director of the laboratory of experimental psychology at the Paris Ecole des Hautes Etudes and editor of the 'International Library of Experimental Psychology,' now being published in fifty volumes.

It is said that there will shortly be published at Paris a monthly journal devoted to radium and called *Le radium*.

SOCIETIES AND ACADEMIES.

THE GEOLOGICAL SOCIETY OF WASHINGTON.

The 149th meeting was held on January 13, 1904. The following papers were presented in the regular program.

The Work of the Strassburg Seismological Congress: H. F. Reid.

Professor Reid, who was the official delegate from the United States, stated that the congress was held in response to a call from the German government to discuss the organization of an international seismological association. The congress was attended by official delegates from nineteen countries, and two others were unofficially represented.

The conference resulted in the determination of the form of an international seismological association, which will be submitted to all civilized nations of the world by the German government. The most important clauses of the constitution are as follows:

"The object of the association is the study of seismological problems, whose solution is only possible by the cooperation of many observatories in all parts of the world. The principal means of attaining this object are: (*a*) Observations according to common principles; (*b*) experiments on problems of special importance; (*c*) foundation and support of