

porting friction and the need of additional intelligent supervision" (p. 327).

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SCIENTIFIC JOURNALS AND ARTICLES.

The American Naturalist for January contains the following articles: 'The Habits of the Striped Meadow Cricket (*Ecanthus fasciatus* Fitch),' Joseph L. Hancock; 'The Embryo of the Angiosperms,' Harold L. Lyon; 'Notes on the Commensals found in the Tubes of *Chaetopterus pergamentaceus*,' H. E. Enders; 'On the Larva and Spat of the Canadian Oyster,' Joseph Stafford; 'A Table to Facilitate the Determination of the Mexican Scale Insects of the Genus *Aspidiotus* (Sens. latiss),' T. D. A. Cockerell, besides reviews and notes.

The Popular Science Monthly for March has papers on 'The Bermuda Islands and the Bermuda Biological Station for Research,' Edward L. Mark; 'A Study of the Development of Geometric Methods,' Gaston Darboux; 'Some Present Problems of Technical Chemistry,' W. H. Walker; 'Stamina,' A. N. Bell (dealing with the prevention of tuberculosis); 'The Natural History of Adolescence,' Joseph Jastrow; 'Higher Education of Women and Race Suicide,' A. Laphorn Smith; and 'Simple Bacteriology for Public Schools,' Lillian Chapin. There are also shorter articles, including one, illustrated, on 'The Inland White Bear,' by W. J. Holland, and another on 'The Carnegie Institution.'

The Museums Journal of Great Britain has a most excellent paper, with valuable discussion appended, on 'Museums and Nature Study,' by Frank Woolnough. The question of lectures by the curators is touched upon and the suggestion made that the nature teaching may best be restricted to the life and geology of its immediate locality. S. L. Moseley tells 'How we made the Keighley Museum Popular,' and in the discussion special stress was laid upon the educational value of museums and the many things a curator is called upon to do. As Dr. Haddon said, 'the curating of a museum is hard work,' the more that like an iceberg it was seven eighths be-

low the surface and none but those who knew realized the extent of the unseen seven eighths. The balance of the number is filled with reviews and notes.

THE contents of *The Journal of Infectious Diseases* for March are as follows:

HARBITZ, FRANCIS: 'Studies in the Frequency, Localization, and Modes of Dissemination of Tuberculosis, with Special Reference to its Occurrence in the Lymph Nodes and During Childhood.'

HEKTOEN, LUDVIG: 'Experimental Measles.'

NOVY, FREDERICK G., and MACNEAL, WARD J.: 'On the Trypanosomes of Birds.' (With Plates 1-11.)

WHERRY, WILLIAM B.: 'Some Observations on the Biology of the Cholera Spirillum.'

MUSGRAVE, W. E., and CLEGG, MOSES T.: 'Amebas: Their Cultivation and Etiological Significance.' (With Plate 12.)

MCCINTOCK, T. C., BOXMEYER, CHARLES H., SIFFER, J. J.: 'Studies on Hog Cholera.'

THE *London Times* has established an engineering supplement to be issued weekly. The first number, which appeared on March 1, contains articles on 'British Engineering,' by Sir Charles McLaren; 'Submarines,' by Sir William White; 'The Motor Omnibus,' by C. W. B. Little, and numerous other articles and notes.

SOCIETIES AND ACADEMIES.

THE NEW YORK ACADEMY OF SCIENCES.

SECTION OF ANTHROPOLOGY AND PSYCHOLOGY.

THE section met in conjunction with the New York Section of the American Psychological Association on January 30, afternoon and evening. Professor Woodbridge presided. The following papers were presented:

Color Preferences: R. S. WOODWORTH and FRANK G. BRUNER.

Tests of different races, made at the St. Louis Exposition, showed that red was the color most often preferred, both by men and by women, and by all the races tested. The predominance of red choices was very great. Now previous authors have found, in the white race, that red was a woman's choice, but blue that of most men; this difference of result, as between the present and previous authors, is

probably due to the different material used for presenting the colors—colored papers having previously been employed, whereas in the present tests use was made of colored worsteds, such as are used in the Holmgren test for color blindness. Special tests showed that the same individual is very likely to express a different preference, according as the colors are presented in paper, worsted, or glass. Many persons were also found to dislike strongly the colors of the rose, the violet, and the sunset, when presented in paper or worsted. The inference is that the 'color-tone' is by no means a compelling factor in determining likes and dislikes of colored objects.

The Relation of Intensity of Sensation to Attention: M. TSUKAHARA.

In an experimental study of the effects of distraction on the apparent intensity of a stimulus, a new method of distraction was employed. Two sorts of stimulus—the sound of a falling ball and the impact on the skin of a falling hammer—were employed, and sometimes presented simultaneously, so that the attention had to be divided between them. For instance, first a sound was given; next, simultaneously, a sound and an impact; and last an impact alone. The subject was required to compare the intensities of the two sounds and also of the two impacts. The result was that, contrary to the conclusion of Münsterberg, distraction *decreased* the apparent intensity of the stimuli; but this result is so far merely provisional.

Ideas and Temperaments: DICKINSON S. MILLER.

In the psychology of intellectual bias one may study the individual or type in its relation to a variety of ideas, or the idea in relation to a variety of individuals or types. Attempting the latter with the so-called 'ideas of the French Revolution,' liberty, fraternity, equality, reason, the natural goodness of man, and the rights of impulse, spontaneously advocated in literature, we find that different phases of these ideas must first be distinguished. As regards the ideas in these phases, the sympathy or antipathy of authors is found

to depend in a determinate manner on the temperamental type.

Organic Levels in the Evolution of the Nervous System: ROBERT MACDOUGALL.

The relation of organization to discriminative reaction may be stated in terms of four types, the non-nervous, the ringed nervous, the segmented and the cephalic. The types were described.

Number Habit: ROBERT MACDOUGALL.

By number habit is meant the distribution of frequency in the recurrence of each of the digits when the choice is determined by mental constitution rather than objective evidence. Previous reports have given two types, a curve (Minot's) in which the changes from figure to figure are slight, presenting a high plateau in the middle of the series with a depression toward either end; and a curve (Dresslar's and Sanford's) in which maxima systematically appear in the odd numbers and minima in the even. From an apparently similar series of guesses in the present case a curve was obtained presenting three different levels. Zero and five formed maxima in relation to which all the other digits fell in a low plateau, and of the rest the even numbers formed maxima and the odd minima throughout.

The Relational Theory of Consciousness: W. P. MONTAGUE.

The new movement in favor of a relational theory of consciousness is to be welcomed in the interest of a scientific psychology. It is however seriously hampered by a failure on the part of most of its advocates to realize the incompatibility of any form of idealism with the view that consciousness is a relation between its objects, and not something in which they inhere. Things must be before they can be related, hence if consciousness is a relation no object can depend for its existence upon the fact that it is perceived. In short the realistic theory of the world is a necessary implication of the relational theory of consciousness; while, conversely, if we follow common sense in admitting the objective reality of both primary and secondary qualities, there will be no temptation to treat consciousness

as anything other than special relation between an organism and its environment. Realism and the relational view of consciousness are strictly correlative. They are different aspects of the same truth, and can not be defended or understood apart from one another.

Radical Empiricism and Wundt's Philosophy:

CHARLES H. JUDD.

Wundt's Critical Realism is closely related in its fundamental positions to James's recent philosophical discussions. Reality and immediate experience are made synonymous by Wundt. The concept of consciousness is not like the concept matter of the physical sciences, but includes only the immediate processes of experience in their totality. On the basis of these closely related fundamentals Wundt develops the details of his system in such a way as to emphasize the distinctions between physical and psychical phenomena while James strives to minimize these distinctions.

R. S. WOODWORTH,

Secretary.

THE TORREY BOTANICAL CLUB.

MINUTES of a meeting held February 14, 1905, at the American Museum of Natural History.

The first paper, which was illustrated by lantern slides, was by George H. Shull and was entitled 'Stages in the Development of *Sium cicutiæfolium*.' Dr. Shull presented briefly the great range of leaf-form in this species at different stages of growth, concluding that these various stages give no safe indication of ancestral forms.

The life cycle of *Sium* fits it for the conditions under which it grows at different stages of its growth, it being mesophytic, hydrophytic and xerophytic in turn. This cycle of changes seems to be independent of external conditions and proceeds regularly without regard for the environment. The consideration of a number of rejuvenated buds shows that rejuvenescence may be brought about by submerging senescent buds in water, and that the later the stage of senescence the earlier will be the juvenile forms which are induced to ap-

pear. Evidences were presented tending to prove that the proximal leaflets of pinnate leaves are homologous in any series of leaves taken from the same plant and that the other leaflets are likewise homologous, counting from the proximal pair.

The paper was the subject of considerable discussion.

The second paper was by Tracy E. Hazen, on 'Recent Advances in the Phylogeny of the Green Algæ.' The subject was introduced by a sketch of Borzi's group Confervales, now enlarged into the class Heterokontæ, comprising genera showing natural affinities, taken from the three old orders Protococcales, Confervales and Siphonæ. This new class, accepted by all recent investigators, serves to indicate the artificiality of the traditional classification.

The clearer lines of descent of the chief groups of Chlorophyceæ from the unicellular, motile *Chlamydomonas* were traced; the first tendency in the direction of aggregations of motile cells finding its highest expression in *Volvox*; the second tendency, in the direction of septate cell division, to form non-motile bodies of increasing solidarity, leading through the Tetrasporaceæ to the Ulvaceæ, which have been placed in a separate order, Ulvales, by some recent authors, and finally, through such forms as *Stichococcus*, to the typical filamentous and branched forms culminating in *Coleochaete*. The third or *Endosphaerine* tendency from *Chlamydomonas* as suggested by Blackman, was held by the speaker to furnish an unsatisfactory origin for the Siphonæ, inasmuch as the endophytic forms associated with *Endosphaera* may be regarded as too specialized in their mode of life at least. It is much more natural to derive the Siphonæ from the septate, multinucleate Cladophoraceæ. The latter group may well be regarded as an intermediate order, easily derived from the Ulotrichaceæ through such forms as *Hormiscia* (*Urospora*) and *Rhizoclonium*.

The recent proposition of Bohlin and Blackman to regard the CEdogoniaceæ as forming a class derived from a separate unicellular ancestor is at least premature, and it does not appear at all impossible that this group may have been derived from a *Ulothrix*-like form

as suggested by Oltmanns. The Conjugatæ furnish a perplexing problem, but the speaker preferred to regard this group as forming an order of Chlorophyceæ rather than as a separate class, in view of present evidence.

EDWARD W. BERRY,
Secretary.

THE SCIENCE CLUB OF THE UNIVERSITY OF
WISCONSIN.

THE fifth meeting of the club for the year 1904-5 was held in the large auditorium of University Hall, on February 23, at 7:30 P.M. The paper of the evening, by Dr. U. S. Grant, of Northwestern University, dealt with the subject 'The Lead and Zinc Mines of Southwestern Wisconsin.' Dr. Grant presented the main results of a careful survey of this region, which during late years has again become an important factor in the domestic lead and zinc production. The work was done under the direction of the Wisconsin Geological and Natural History Survey and a full account of the results obtained will be given in the near future in a bulletin published by the survey. The paper was discussed by various members of the university faculty and others, after which a business meeting of the club was held.

F. W. WOLL,
Secretary.

DISCUSSION AND CORRESPONDENCE.

BLUNDERS IN THE SCIENTIFIC RECORDS.

THE systematic zoologist and zoogeographer of to-day who is trying to utilize for generalizations the facts which have been accumulated by previous generations is constantly baffled—and often led astray by the insufficiency of the material gathered, the lack of detail and accuracy in the labeling, and the often downright erroneousness in the recording. The last is particularly vexatious, because once put into print, it is almost impossible to eradicate such errors. The everlasting recurrence in zoogeographical text-books of the allusion to the toad once falsely stated to have come from the Hawaiian Islands, and to the two-handed lizard alleged to inhabit

Colorado, are familiar examples of these undying errors.

A rather flagrant case of erroneous locality record was exposed some time ago. In 1881 Dr. Victor-Lopez Seoane startled the zoological world by describing a boid snake from the Philippine Islands. It was stated to have been collected by his brother at Manila, and to say that the case puzzled the zoographers is to put it mildly. It was soon discovered that it belonged to a West Indian genus, *Epicrates*, and in my 'Herpetology of Porto Rico' (1904) I showed conclusively that the snake must have come from Porto Rico, being identical with *E. inornatus* which is peculiar to that island. Dr. Seoane's brother is a Spanish naval officer, a general in the marine corps, and this circumstance explains the mixing up of the Philippine and the Porto Rican localities.

A parallel to this blunder has just come under my notice. In 1890 Dr. Seoane again described (in the *Mémoires de la Société Zoologique de France*, III., p. 260, pl. vi) a new species from the Philippine Islands, collected by the same brother. This time it was a toad which received its name, *Bufo panayanus*, from the island of Panay, the alleged type locality being Iloilo. He correctly compared it with *B. gutturosus* from Santo Domingo, but failed to profit by this resemblance to the West Indian species, of which he regarded it as the 'oriental pendant.' While recently completing a list of Philippine batrachians and, therefore, looking up the original records, I was struck by the similarity of Seoane's figures to the Porto Rican toad *Bufo lemur* and a comparison with specimens of the latter easily demonstrated their identity. The relationship to *Bufo gutturosus* from Haiti, which is quite close, is thus easily accounted for, and the 'oriental pendant' done away with. *Bufo panayanus* finds a final resting place in the synonymy of *Bufo lemur*, and the list of Philippine batrachians is one species poorer!

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