Societies and Academies.

CALCUTTA.

Asiatic Society of Bengal, July 6.—Braja Lal **Mukherjee**: The Vrātyas and their sacrifices. Vrātyastoma is a social or religious penance for those who have in some manner or other defied or neglected religious law and order. Men originally belonging to the Vaidik community, but becoming alienated, and neglecting or defying Vaidik precepts, and creating disorder, were called Vrātyas.—Bimala Charan **Law**: Data from the Sumangalavilāsinī. An attempt has been made to present from the Sumangalavilāsinī (the commentary on the Dīgha Nikāya of the Sutta Pitaka, written by Buddhaghosa), interesting materials for the study of ancient Indian life.

SYDNEY.

Linnean Society of New South Wales, May 27.—May M. **Williams**: Contribution to the cytology and phylogeny of the siphonaceous Algæ. (i.) The cytology of the gametangia of *Codium tomentosum*. In the nuclear divisions occurring in the cœnocytic threads of the vegetative parts of the plant, twenty univalent chromosomes are present. Reduction division occurs in the gametangium as the result of two nuclear divisions which occur there. Certain of the nuclei present in the young gametangium degenerate before these divisions occur. The selection of functional nuclei is associated with the presence of bodies of the nature of cœnocentra within the gametangium.—H. **Burrell**: Burrowing habits of Ornithorhynchus. A Platypus (usually the female), in excavating its burrow, will, if necessary, lie on its back to work. Its muscular and mobile movements are described, particularly with reference to the work of the hind feet, which have a "two-way" action, and are as versatile as those of a chimpanzee. The functions of the hind and front legs are interchangeable.—J. R. **Malloch**: Notes on Australian Diptera. No. vi.—G. D. **Osborne**: Geology and petrography of the Clarencetown-Paterson District. Part iv. The petrographical account of the Kuttung igneous rocks is divided into (*a*) a general discussion of such matters as the sequence of flows and their mutual relationships, and the presence of devitrification, of spherulitic structures, and in particular of evidence which has been interpreted as indicative of the operation in some rocks, after consolidation, of processes connected with the magmas from which these rocks were derived; (*b*) a petrographical description of the rocks, taken in groups.

Royal Society of New South Wales, July 1.—H. Leighton **Kesteven**: (1) A third contribution on the homologies of the parasphenoid, ectopterygoid, and pterygoid bones, and of the metapterygoid. (2) The parabasal canal and the nerve foramina and canals in the bird skull. The application of Gaupp's designation "parabasal" to the carotid canal and the demonstration of the course of the palatine branch of the facial nerve serve to emphasise resemblances to the reptilian conditions.—A. R. **Penfold**: Note on the identity of uncineol with eudesmol. Uncineol ($C_{10}H_{18}O$, $[a]_D$ 20° C. +36·99°; melting-point, 72·5° C.) is an alcohol which appears to bear a close resemblance to one of the terpineols, isolated in 1907 by Messrs. Baker and Smith from the essential oil of *Melaleuca uncinata*. The more recent investigation has shown this substance to be identical with the sesquiterpene alcohol eudesmol. The chemical and physical characters are: Melting-point, 80·5°-81° C.; boiling-point, 155-156° C. at 10 mm.; specific rotation, +33·45°; molecular weight determinations, 221 and 227; molecular formula (combustion results), $C_{15}H_{26}O$; melting-point of dihydrochloride, 75-76° C.—Sir George **Knibbs**: Multiple births, their characteristics and laws mathematically considered. Considering the question of masculinity of population generally, of live-births, and of the still-born, it is shown that the preponderance of males is most marked in the last, being about 21·9 per cent. greater than that of live-births. In Australia, as the masculinity of the general population decreases, that of the live-births increases. Applying the theory of probability to the occurrence of twins, about 76 per cent. of the cases are from two ova, and about 24 per cent. from one ovum. In the latter case the pair may be either both male or both female, and have a common chorion, while twins born from two ova are indifferently male and female, two males, or two females, and each has its separate chorion. Only about 10·9 per cent. of triplets are from three ova, while in 69·1 per cent. there is a division of one of the ova into two. There is an increase of the liability of twins with the age of the mother each year from 12 years to 39 years, when it diminishes, nearly by the same amount each year of age, until it becomes nothing at age 54. This greater liability with age to twins increases with the duration of marriage and with the number of previous confinements.

Diary of Societies.

WEDNESDAY, AUGUST 26.

BRITISH ASSOCIATION FOR THE ADVANCEMENT OF SCIENCE (at Southampton), at 8.30 P.M.—Prof. H. Lamb: Presidential Address.

THURSDAY, AUGUST 27.

BRITISH ASSOCIATION FOR THE ADVANCEMENT OF SCIENCE (at Southampton), at 10 A.M.—Prof. W. A. Parks: The Cultural Aspects in Geology (Presidential Address to Section C).—Sir Archibald Denny: Fifty Years' Evolution in Naval Architecture and Marine Engineering (Presidential Address to Section G).—Prof. J. Spearman: Mental Law of Diminishing Returns (Presidential Address to Section J).—Prof. J. Lloyd Williams: The Phœophyceæ and their Problems (Presidential Address to Section K).—At 11.30 A.M.—A. R. Hinks: The Science and Art of Map-making (Presidential Address to Section E).—At 2.—Conference of Delegates of Corresponding Societies.—Address by Sir Daniel Hall, President of the Conference.—At 7.30.—Major A. G. Church: Science and the East African Commission (Citizens' Lecture).

FRIDAY, AUGUST 28.

BRITISH ASSOCIATION FOR THE ADVANCEMENT OF SCIENCE (at Southampton), at 10 A.M.—Dr. G. C. Simpson: The New Idea in Meteorology (Presidential Address to Section A).—C. Tate Regan: Organic Evolution: Facts and Theories (Presidential Address to Section D).—Dr. W. W. Vaughan: The Warp and the Woof in Education (Presidential Address to Section L).—At 11 A.M.—Miss Lynda Grier: The Meaning of Wages (Presidential Address to Section F).—At 11.30 A.M.—Dr. T. Ashby: Practical Engineering in Ancient Rome (Presidential Address to Section H).—At 2.30 (Section I).—J. E. Barnard: The Observation of the Infinitesimally Small (Lecture).—At 8 P.M.—A. V. Southwell: Aeronautical Problems of the Past and of the Future (Discourse).

SATURDAY, AUGUST 29.

BRITISH ASSOCIATION FOR THE ADVANCEMENT OF SCIENCE (at Southampton), at 8.—Dr. F. A. Dixey: Mimicry in relation to Geographical Distribution (Lecture for Young People).—At 8.—Prof. E. V. Appleton: The Rôle of the Atmosphere in Wireless Telegraphy (Citizens' Lecture).

MONDAY, AUGUST 31.

BRITISH ASSOCIATION FOR THE ADVANCEMENT OF SCIENCE (at Southampton), at 10 A.M.—Prof. C. H. Desch: The Chemistry of Solids (Presidential Address to Section B).—Prof. A. V. Hill: The Physiological Basis of Athletic Records (Presidential Address to Section I).—Dr. J. B. Orr: The Inorganic Elements in Animal Nutrition (Presidential Address to Section M).—At 3.—W. H. Barker: The Development of Southampton in relation to World Commerce (Lecture for Young People).—At 5 (Section K).—Dr. D. H. Scott: Some Points in the Geological History of Plants (Lecture).—At 8.—Capt. P. P. Eckersley: Some Technical Problems of Broadcasting (Citizens' Lecture).

TUESDAY, SEPTEMBER 1.

BRITISH ASSOCIATION FOR THE ADVANCEMENT OF SCIENCE (at Southampton), at 3.—Prof. W. J. Dakin: Whaling in the Southern Ocean (Lecture for Young People).—At 8.—C. J. P. Cave: The Highway of the Air (Citizens' Lecture).

WEDNESDAY, SEPTEMBER 2.

BRITISH ASSOCIATION FOR THE ADVANCEMENT OF SCIENCE (at Southampton).