CENTENARIES

Johnson, William Woolsey (1841–1927)

WILLIAM WOOLSEY JOHNSON, an American mathematician, was born of a lawyer and landowner at Owego, New York, June 23, 1841. He graduated at Yale in his twenty-first year and entered the United States Nautical Almanac Office. After two years, he became instructor in mathematics at the Naval Academy and remained as such throughout his life except for his sojourn as professor of mathematics at the Kenyon College, Ohio, during 1870–72 and at St. John's College during 1872–81.

Johnson was one of the founders of the American Mathematical Society. He was a popular lecturer and a clear writer. Between 1869 and 1901 he wrote seven books, of which Indian students would remember *A treatise of ordinary and partial differential equations* (1889). His most voluminous book was *The elements of differential and integral calculus*, 3V. (1874–76).

Johnson died May 14, 1927.

Cullingworth, Charles James (1841–1908)

CHARLES JAMES CULLINGWORTH, a British gynæcologist, was born of a bookseller at Leeds June 3, 1841. After school education and a few years' employment in his father's business, he had a brilliant career at the Leeds School of Medicine and became M.R.C.S. in 1865. After a short spell of private practice in rural areas, he entered the Manchester Royal Infirmary in 1867. His special work began in 1873 when he was appointed honorary surgeon to the St. Mary's Hospital for Women and Children at Manchester. In 1885 he became Professor of Obstetrics and Gynæcology in the Owen's College. In 1888 he migrated to London as obstetric physician of St. Thomas's Hospital.

In 1902 Cullingworth delivered the Brodshawe lecture on *Intraperitoneal hemorrhage incident to ectopic gestation*. He was one of the founders of the Obstetrical Society of London and of the *Journal of Obstetrics and Gynæcology of the British Empire*.

Cullingworth was prominent in the movement for the registration of midwives. When the Midwives Act came into force in 1902, he was appointed to the Central Midwives Board. He was a great pioneer in gynæcology. His most original book was *Clinical illustrations of the diseases of fallopian tubes and of tubal gestation* (1895). The views expressed by him in 1892 in a paper entitled *The value of abdominal section in certain cases of recurrent peritottis based on personal experience of fifty cases* were greatly discussed and were ultimately accepted.

Cullingworth died in London May 11, 1908.

S. R. RANGANATHAN.

University Library,
Madras.

THE INTER-UNIVERSITY BOARD, INDIA

THE brief Report of the Proceedings of the Sixteenth Annual Meeting (Trivandrum, 1941) of the Inter-University Board, recently published, contains as usual, several items of interest to those who are concerned with the development of higher education in India. It sets forth the opinions of the various universities of India on certain matters, and the decisions of the Board as a whole in regard to certain others. Special reference may be made here to three of the most outstanding problems considered by the Board: Military Training of university students, mutual recognition of degrees among Indian universities, and reorganization of secondary education.

In the present unsettled state of the world it is but natural that the question of imparting military training to students should have come to the forefront. Apart from the more general question of maintaining physical fitness among the educated classes, the problem of defending the country against foreign aggression seems to demand immediate consideration. In this connection, therefore, the Board has done well to suggest not merely the further extension of the presnt U.T.C. arrangements but also the introduction of *military science as a subject of study* in college classes. This is a sound move provided, of course, it is not thought that a nation can be rendered militarily efficient by reading about military matters in books.

The mutual recognition of degrees among Indian universities is undoubtedly a most desirable step. The want of such recognition has adversely affected students in the pursuit of higher education, retarding their free migration from one university area to another. After all, when the question is squarely put as to what has prevented, and still prevents, Indian universities from taking this step, perhaps the answer in most cases will be, not any desire to claim superiority, but some administrative trifle, or mere parochialism, which is altogether out of place in the academic world. The sooner this anomaly is removed the better for education.

The reorganization of secondary education is by far the most important question discussed by the Board. It is a problem, however, whose solution cannot be regarded as having been achieved, in spite of repeated consideration by the Board at three separate sittings. Resolution

XVIII recommends the bifurcation of high school studies into a vocational and an academic course; and in Appendix K is found the Press Communique of the Government of Madras setting forth the manner in which they have attempted to solve the problem for that province. It must however be pointed out in this connection that a merely educational approach to the problem is bound to fail; an economic apprcach is necessary. There is no use of turning out vocationally qualified persons unless vocations were made available for them.

Finally a word must be said about the language of the publication. In a Report which purports to set forth the deliberations of such a learned body as the Inter-University Board one expects that the English, like Cæsar's wife, must be above reproach. But apart from ridiculous printer's devils such as the 'Massage' of the Maharaja of Travancore (p. 4), there are other errors which ought not to have been allowed. Thus, for instance, 're' (p. 11) must be written in full as 'regarding', or it must be italicised; 'para' (p. 24) must be 'paragraph'; 'Inter' (p. 17) must be 'Intermediate'. Consider the wording of the following sentence (p. 10):

"It was also noted that if any University wants to nominate a representative in addition to those above mentioned at their own expense, the Board had no objection."

This sentence furnishes an excellent example of an exercise for correction (which may be set) in the English composition paper at the Intermediate examination of an Indian university.

D. S. GORDON.

SCIENCE NOTES AND NEWS

Archaeological Finds in Mexico.—The news of what is described as the "most spectacular" discovery in three seasons of Mexican explorations, has been announced by Matthew W. Stirling, leader of the Geographic-Smithsonian expedition, which recently carried out extensive excavations in Southeastern Mexico. According to a news bulletin issued by the *National Geographic Society*, a cache of more than 700 jade objects, including a number of human figures, pendants, axes, heads, large tubular and spherical beads and other objects, was unearthed.

The Geographic-Smithsonian expedition has been seeking clues to the origins of the ancient Indian civilizations of Middle America. In its first season it unearthed a colossal stone head, and a monument carved with Maya Indian symbols which scientists considered to be the earliest recorded date found so far in the Western Hemisphere. By one correlation that date is equivalent to November 4, 291 B.C., and by another, November 4, 31 B.C.

The Geological Origin of Burma.—Broadly speaking, the origin of Burma with its present configuration of land and sea and surface features can be traced back to an era starting from the Cretaceous period and ending at the close of the Tertiary era. It was during this period that the rising of the Himalayas from the Tethys sea took place. Burma, which had been subjected to a series of submergences and elevations, was still submerged during the early stages of this period. Just then huge tectonic movements, acting almost simultaneously with those which were responsible for raising the Himalayas from the floor of the Tethys, brought into being the Arakan Yoma range and the Shan plateau which even to-day are the most prominent features of the topography of Burma. Between these two was formed a central gulf elongated in a direction N-S and occupied by a shallow sea. The major portion of Burma as it now is, was then covered by this gulf which was connected to an ocean in the south. There is no evidence to prove that it was actually connected to the Tethys. (*Geol. Sur. Ind.*, 74, pt. 1.)

During the whole of the Tertiary era this gulf was being filled up with river-borne sediments from the north and by marine sediments in the south, with the consequence that the sea occupying this gulf slowly receded southwards and most of the 'Central Belt' of Burma became a land-mass by the close of the Tertiary era. At intervals this gradual infilling of the gulf was interrupted by light folding movements. It was in this gulf and at this period that the oil-bearing rocks of central Burma were deposited. N. JAYARAMAN.

***p*-Aminobenzoic Acid.**—A preliminary account of the experiments on the nutritional significance of *p*-Aminobenzoic acid has been published by Dr. S. Ansbacher in *Science* (1941, No. 2407, pp. 164–65). According to the data presented, this amino acid is a chromotrichia factor for the rat, and a growth-promoting factor for the chick, and is probably one of the factors of the vitamin B complex.

Hundred black or piebald rats at weaning age were placed on a basal diet and were given a daily supplement of thiamine hydrochloride, riboflavin, pyridoxine hydrochloride, calcium pantothenate, nicotinic acid, inositol, and choline chloride. Definite graying of the fur occurred. Seventy animals which later received a daily supplement of *p*-aminobenzoic acid recovered within a month while the remaining 30 rats reserved as controls, continued to show achromotrichia.

Experiments with chicks gave definite indication of the growth-promoting potency of this amino acid. Chicks reared on a heated vitamin K-deficient ration showed only a small gain in weight and died within a month, even when