large number of plants from tropical and arid regions, many of them collected by himself. The writer remembers especially the unusual richness of the collection of Piperales and ferns. He was always most generous in sharing his interesting plants with other laboratories and gardens.

After his first paper, on the crystallization of cellulose, published in 1895, which thoroughly reflects his characteristic care and precision in research and writing, he turned to the field of morphological botany and, excepting several excursions into ecology, he confined his studies mainly to morphology throughout the remainder of his life. In his next two papers, on the sporocarps of the water-ferns, Marsilea and Pilularia, the very intricate developmental history of these fruit bodies was made known for the first time. These and subsequent contributions on the Marsileales placed Johnson among the leading young men in American botany.

In 1900 Johnson began a series of studies on the Piperales, which eventually resulted in ten publications. In the first of these, on the endosperm and embryo of *Peperomia pellucida,* he announced the discovery of a quite unexpected type of embryo-sac development, in which sixteen free nuclei are formed in the sac at first, eight of them subsequently fusing to form a single endosperm nucleus. Equally interesting and important is his discovery that in several genera of this family seed germination begins with a remarkable proliferation of the endosperm, which thus breaks through the seed coats and extends well beyond them while it still encloses the cotyledon tips. His discoveries in this family led him to the generalization: "The embryo sporophyte is perhaps everywhere nourished through the gametophyte and not by the parent sporophyte directly." From the results of his subsequent investigations on various species of the Piperales he made it clear that this group exhibits a remarkable variation in the development of the sac and other parts of the seed—a variation not yet known to be surpassed in any other group of the angiosperms. Thus Johnson convincingly confirmed an opinion of the great Hofmeister, that the developmental history of the embryo sac, endosperm and nucellus does not furnish a satisfactory general basis for classification.

The great breadth of Johnson's botanical interest is illustrated by his excursions into the field of ecology and plant distribution. In 1900 he published his paper on the flora of the banks and sounds near Beaufort, North Carolina, and fifteen years later he and Harlan H. York were joint authors of a contribution on the relation of plants to tide-levels in the region of Cold Spring Harbor. In 1921 and 1927 were published two very interesting papers by Johnson on plant migration into a Jamaican valley that had been suddenly denuded by a torrential downpour of twenty-seven inches of precipitation in only two days. His last ecological paper is the one in which he showed that flowers of the giant cactus (Carnegiea) were more numerous and opened several days earlier on the east side than on the west side of the stem. The stem tissues on the east side were generally found to be about two degrees warmer than on the west side when the floral buds were enlarging and opening, in May and June.

In 1931, at the close of his thirtieth year as professor in the Johns Hopkins University, Johnson's students arranged a dinner in his honor and on that gala occasion he was greatly pleased by being presented with a portfolio of appreciative letters and photographs from his students and colleagues. At the same time was first shown the Johnson portrait, done in oils by Mr. T. C. Corner, which now hangs in the main reading room of the library at the university.

On June 22, 1904, Dr. Johnson married Miss Mary E. G. Lentz, of Baltimore, a graduate of Goucher College, who still resides at their beautiful home in Roland Park. Two sons also survive him—George Duncan, who is now in Venezuela with an oil corporation, and David Starr, who is with a commercial firm in Baltimore. Both are graduates of the Johns Hopkins University and the elder received the Ph.D. degree there in 1934.

In conclusion, the writer must add a few words in appreciation of the character of his old friend. Dr. Johnson's mind, heart and body were always in complete harmony. He never expressed a mean or ungenerous thought, and I do not believe that he ever entertained one. Throughout four years of close association with him as student and friend the writer never knew him to show any sign of anger or undue excitement. His life seemed to run smoothly always, like a gently flowing river, too deep to be agitated, ever becoming deeper and broader as it ran its appointed course.

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UNIVERSITY OF NORTH CAROLINA

RECENT DEATHS

REAR ADMIRAL RAYMOND STANTON PATTON, since 1929 director of the U. S. Coast and Geodetic Survey, with which he had been connected in various capacities since 1904, died on November 25 in his fifty-fifth year.

DR. STORRS BARROWS BARRETT, until his retirement with the title emeritus in 1930 associate professor of astrophysics at the University of Chicago, died on November 26 at the age of seventy-three years.

HENRY WARD TURNER, consulting geologist and mining engineer, formerly geologist in the U. S. Geological Survey, died on November 26 at the age of eighty years.

SIR JAGADIS CHANDRA BOSE, professor emeritus of physical science in the Presidency College, Calcutta, founder and director of the Bose Research Institute, which was established in 1915, died on November 23 at the age of seventy-nine years.

Nature reports the death of Herbert William England, who had for nearly forty years been in charge of the departmental library of the Zoological Department of the British Museum (Natural History), on October 30 at the age of fifty-five years; and of Professor J. B. Senderens, correspondent of the section of chemistry of the Paris Academy of Sciences and honorary fellow of the British Chemical Society, aged eighty-one years.

DR. VLADIMIR NIKOLAEVITCH LUBIMENKO, noted plant physiologist at the Principal Botanical Garden, Leningrad, died on September 14. A correspondent writes: "His contributions on the nature of chlorophyll, the transformation of the pigments in plastids of living cells and photosynthesis brought him recognition throughout the world. He was a member of the Academy of Science of the USSR, of the Academy of Science of the Ukraine, member of various foreign societies devoted to botanical science and a corresponding member of the American Society of Plant Physiologists. Up to an hour before his death he had been engaged in writing at his desk. He was born on January 18, 1863."

SCIENTIFIC EVENTS

THE INTERNATIONAL CONGRESS OF ANTHROPOLOGY AND ETHNOLOGY

THE second session of the International Congress of Anthropology and Ethnology will meet in Copenhagen under the presidency of Dr. Frans Blom, director of the department of Middle American Research at Tulane University of Louisiana, from August 1 to 6, 1938. On this occasion the new National Museum will be opened by the King of Denmark and Iceland. Of special interest will be the Knud Rasmussen Eskimo collections, said to be the finest in the world. These have never been shown before. Special exhibits will be made of North, Central and South American collections, such as North American Indian costumes and weapons, Mexican mosaics on wood, collections from Guatemala and Honduras, the famous Lagoa Santa skulls from Brazil. Furthermore, there will be an opportunity to inspect the original Icelandic manuscripts relating to the early discovery of America by Leif Eriksen and other explorers.

The program will be as follows:

Physical Anthropology: (a) Anatomical and biotypological anthropology. Mutual relations—Inter-relations and affinities of fossil man; Methodology: The conception of the "race" in anthropology. (b) Physiological and hereditary anthropology. Geographical propagation of human blood types and their presence in the animal kingdom.

Psychology: Influence of civilization factors on character; general discussion with Sections B and F on the subject of cultural changes.

Demography: Population movements seen especially from the view of birth and mortality.

Ethnology: (a) Ethnography and folk-lore of Asia. Together with Sections E (a) and E (b): The nomadic-pastoral peoples of Asia and Africa. (b) African Ethnography. See Section E (a). (c) American Ethnography. The inter-relation between the Central American civilizations and those of North and South America. (d) Oceanic Ethnography. The cultural relations between Oceania and Southeast Asia. (e) Arctic Ethnography. Pre-historic and historic currents of civilization in the Circum-Polar regions. (f) European Ethnography and Folk-Lore. Beliefs and customs concerning the agricultural year.

Sociology and Religion: In what measure can archeology and pre-history serve as a basis for the study of intellectual culture? Joint discussions of Sections F and B on the subject of cultural changes.

Linguistics and Writing: Standardization of indigenous languages; formation of common languages—Creole languages and civilized languages spoken by indigenous peoples.

THE INSTITUTE OF CERAMIC ENGINEERS OF THE AMERICAN CERAMIC SOCIETY

THE Institute of Ceramic Engineers now in process of formation will receive applications for membership late in February. At an informal gathering of engineers during the annual meeting of the society in New York City, March, 1937, various methods of organizing the new institute were discussed. A committee was named, consisting of J. L. Caruthers, *chairman*, R. E. Birch, C. M. Dodd, E. H. Fritz and H. E. White, to recommend a method of organization. Also, the committee was asked to canvass the membership of the society to determine (1) how many members would be interested, and (2) what type of by-laws in regard to membership grades and qualifications would be desirable.

More than 330 members of the society answered a questionnaire sent out by the committee, over 280 expressing a desire to belong to the institute. The principal recommendations of the committee follow:

1. That the organization of the institute be started immediately.

2. That the following plan of organization be used: