

able, that for these areas the crust is in equilibrium, would we not be able to use the new formula with effectiveness to show the extent to which the crust under other areas deviates from equilibrium and to arrive at a fair estimation of the real deviation of crustal densities from the normal?

As mentioned earlier, the isostatic anomalies at stations located on thick beds of recent sedimentary rock tend to be negative in sign. This is notably the case in the Indo-Gangetic plain of India, along the coast of Virginia, along the eastern coast of Puget Sound, near the coast of Southern California and in many other places. Similarly, near areas where there are outcropping pre-Cambrian rock, of limited horizontal extent, the anomalies tend to be positive. We wish to be able to evaluate the gravity anomalies in terms of abnormal masses near the stations, and it would seem that this can be done if the constants of the gravity formula are obtained from data secured at stations

that are least likely to be affected by local abnormalities of densities of surface and upper crustal matter.

It should be said that in deriving such a gravity formula the observed values of gravity should be referred to the spheroid. This would reduce the ocean values and increase those on land, thus bringing the anomalies into closer agreement. I believe that the stations at sea and on the continents as here recommended for the derivation of a new formula will be found to be in substantial accord. This can not be the case when unselected land stations are used.

During the assembly of the International Union of Geodesy and Geophysics, held recently at Washington, the writer discussed this matter of a new gravity formula with Dr. W. A. Heiskanen, the director of the Isostatic Institute of the International Geodetic Association, and he agreed to derive a new formula along the lines discussed herein. The results of Dr. Heiskanen's efforts will be awaited with interest.

OBITUARY

CHARLES ZELNY

CHARLES ZELNY, professor of zoology at the University of Illinois, died at his home in Urbana on December 21, 1939. He was born at Hutchinson, Minn., on September 17, 1878, and spent his early boyhood days there. Later his parents moved to Minneapolis, and when he was ready for college, he entered the University of Minnesota, where he graduated in 1898. He remained as a graduate student at Minnesota until 1901, at which time he was granted the M.S. degree. The next year he was a graduate student at Columbia University, working with T. H. Morgan and E. B. Wilson, and the following year he worked at the Naples Zoological Station. Returning to America in 1903, he entered Chicago University, where he obtained the Ph.D. in 1904. He went to Indiana University as an instructor in the summer of 1904. Here he advanced rapidly and held the rank of associate professor at the time of his call to the University of Illinois in 1909. Beginning at Illinois as an assistant professor, he was promoted the next year to the rank of associate professor and in 1915 to a professorship. Upon the retirement of Professor H. B. Ward in 1933, he was made head of the Department of Zoology and chairman of the Division of Biological Sciences. Because of ill health, he had retired from his executive duties in 1938.

On May 29, 1911, he married Ida Benedicta Ellingson, of St. Morris, Wis. Mrs. Zeleny and a son, Charles, Jr., survive.

Dr. Zeleny's family is unique in that three of his brothers are scientists of note. Anthony Zeleny, now retired, was professor of physics at the University of

Minnesota; John Zeleny is professor of physics at Yale; and Frank Zeleny is an engineer with the Burlington Railway.

As is true with every great man, chronological facts such as those enumerated tell but little of the life of Charles Zeleny. They are cold, external. It was the writer's good fortune to have been a student in Dr. Zeleny's first class in embryology taught at the Biological Station in the summer of 1904. For the next three years, our associations were intimate. We worked together, ate at the same table, played together and tramped through the woods and fields together. The fact that one was teacher, the other student entered but little into our thinking. The friendship formed in those early years remained to the end. As a friend he was true, somewhat reserved, seldom talked of his own personal affairs, possessed a subtle, sometimes mischievous, wit, appreciated by those who knew him best. Seldom did he complain about anything. Bitterness, if present, was kept hidden.

As a teacher he was kind, helpful, encouraging, stimulating. As a zoologist his papers in the fields of regeneration, experimental embryology and genetics speak for themselves. They rank among the best contributions of his time. Originality in thinking stands out prominently in all his work.

In recognition of his attainments, he was elected vice-president of section F of the American Association for the Advancement of Science in 1932, and president of the American Society of Zoologists in 1933.

Dr. Zeleny's death at the early age of 61 years is

not only a loss to his relatives and friends, but to science.

FERNANDUS PAYNE

ALMON ERNEST PARKINS

INCAPACITATED by hemiplegia since the previous September, Dr. A. E. Parkins, professor of geography at George Peabody College for Teachers, passed away at his home in Nashville, Tenn., on January 3, 1940.

Dr. Parkins was born at Marysville, Mich., on January 10, 1879. At the age of 17 he began teaching in the rural schools of Emmett Township, Mich., spending his summers as a wheelsman on the ore boats of the Great Lakes. Obtaining much of his training in the school of experience, he was a veteran teacher of 27 when he received the bachelor of pedagogy degree from the State Normal College at Ypsilanti, Mich., and was even more mature with several years' instruction in high-school and normal-college science to his credit when he finally received his B.S. and Ph.D. degrees from the University of Chicago, the latter in 1914 at the age of 35. During his stay at Chicago he did much writing and research in the field of geography, the materials to be used in the courses and publications of Professors Barrows and Salisbury.

After receiving his doctorate he became instructor in agricultural geology and geography at the University of Missouri, and two years later (1916) joined the staff of George Peabody College for Teachers, where he served for twenty-three years.

In 1905 Professor Parkins married Miss Eleanor Grace Stone, of Port Huron, Mich., who survives him.

Dr. Parkins was an earnest traveler in so far as his teaching duties permitted. He frequently conducted student parties on trips through interesting geographical regions. His more extensive journeys with Mrs. Parkins included visits to the Pacific Coast, Canadian Northwest, Mexico, Newfoundland and Labrador and to Europe.

In his professional activities Dr. Parkins was most vigorous. His presidencies included that of the Tennessee Academy of Science in 1922, the National Council of Geography Teachers in 1925, the Association of American Geographers in 1929. He received the Distinguished Service Award of the National Council of Geography Teachers in 1934, and honorary M.Ed. from Ypsilanti State Teachers College in 1922. For considerable periods he was editor of the *Annals*

of the Association of American Geographers, associate editor of the *Journal of Geography*, chairman of the 1933 Yearbook, National Society for the Study of Education. He was often consultant, as of the Cotton Division, Agricultural Adjustment Administration, in 1935.

Of his several books the most recent was the monumental "Our Natural Resources and Their Conservation," which he edited with the collaboration of J. Russell Whitaker. The list of his contributions to geographical and educational magazines and the materials he prepared or revised for classroom use would be long indeed.

There are few really great teachers in any age. Dr. Parkins undoubtedly belongs in the list of the great. All of us connected with the college will miss him. His students will feel his absence even more than the rest of us. He was, first and last, a great teacher.

S. C. GARRISON

H. A. WEBB

GEORGE PEABODY COLLEGE FOR TEACHERS

RECENT DEATHS AND MEMORIALS

DR. WILLIAM D. HAGGARD, of Palm Beach, Florida, past president of the American Medical Association and of the American College of Surgeons, at one time professor of surgery and clinical surgery in the department of medicine at Vanderbilt University, died on January 28 at the age of sixty-seven years.

DR. HAROLD MESTRE, dean of Bard College of Columbia University at Annandale-on-Hudson, died on September 9 in his fifty-sixth year. Dr. Mestre was assistant professor of biophysics at Stanford University from 1928 to 1933 and was for one year honorary fellow in the School of Medicine of Yale University. He became professor of biophysics at Bard College in 1937 and was made dean in 1938.

DR. MARION MACKENZIE, who retired as professor of biology at Temple University, Philadelphia, in 1930, died on February 4.

THE Animal Husbandry Building of the Ohio State University, which has been re-named Plumb Hall in memory of the late Professor Charles Sumner Plumb, who until his retirement in 1931 with the title emeritus was for thirty-seven years professor of agricultural chemistry in the College of Agriculture, was dedicated on February 2.

SCIENTIFIC EVENTS

THE NEW YORK ACADEMY OF MEDICINE

THE address on January 4 of the president of the New York Academy of Medicine reviews the activities of the academy during the year 1939. He points out

that "in some respects, the academy has made greater contributions during the past year to public welfare, to the welfare of medical education in general, to the welfare of its fellowship, than ever before in its his-