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JOEL HASTINGS METCALF.

By S. I. BAILEY.

Joel Hastings Metcalf was born in Meadville, Pa., on January 4, 1866, and died suddenly in the full vigor of manhood on February 21, 1925. A very unusual man thus closed his earthly career at the age of fifty-nine years. Into this span of life was crowded a wide range of activities. In at least three distinct lines of endeavor he achieved an honorable success.

First of all, he was a preacher, a minister in its best sense of the Unitarian Church. To him God was an imminent reality and man's immortality a fact already begun on this Earth. One of the charming traits of his character consisted in a wide tolerance side by side with an intense faith. In the presence of every shade of belief or unbelief, one felt the fervor of his own undisturbed faith. He had strong self-confidence without self-assertion. The doubts of others seemed not to disturb him at all. He was charitable, sympathetic, gracious, but also cool, strong, persistent. Above all, he had an abounding enthusiasm. He met each man on his own plane and took him at his best. Early in life he formed a clear plan of action, and he had the will, energy, and ability to carry it out. This involved continued study and adventure in different lines, and is well illustrated in his educational development. He graduated from the Meadville Theological School in 1890. Immediately he took up advanced studies at the Harvard Divinity School. In 1892 he obtained the degree of Ph. D. from Allegheny College. Later, after more than ten years of labor in the ministry, chiefly at Burlington, Vermont, he studied for a year at Oxford University. While there, in addition to attending some twenty-five lectures weekly on philosophy and religion, he was given a key to the astronomical observatory by Professor Turner and gave much time to astronomical problems. He had been in danger of a nervous breakdown from overwork and had arranged for a year's rest and study. His nature, however, did not permit him to seek rest in idleness. Nevertheless, the change of scene and activity accomplished the desired result, and Dr. Metcalf returned to the United States in improved health and took up the work of the pastorate at Taunton, Mass. From 1910 to 1920 he was minister of the Unitarian Society at Winchester, Mass., and from 1920 to the time of his death he was minister of the First Parish, Portland, Maine. The regard in which his ministerial labors were held was fittingly shown by the award of the degree of Doctor of Divinity in 1920 by the Meadville Theological School. His influence was especial-

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REV. JOEL HASTINGS METCALF.
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ly strong among men. This was evident at the funeral in his Portland church, which was filled with men of all stations in life, ranging from justices of the Supreme Court to ordinary workmen.

The second absorbing interest in Mr. Metcalf's life was astronomy. Apparently his passion for this science was present throughout his life. When a boy of twelve years, he carried home from Sunday school Proctor's "Other Worlds than Ours." At about the same time his interest was further aroused by a solar eclipse. He found a lens in an abandoned house, and did odd jobs for his mother in order to earn the sixteen dollars necessary to mount it. He bought his first photographic telescope while in Burlington. This was a second-hand instrument provided with a dome, which he obtained in New York State in winter and conveyed across Lake Champlain on the ice on sledges. It had a narrow escape, as the ice cracked in one place. The horses jumped clear, leaving the dome balanced across the fissure. The cost of this outfit was five hundred dollars, an amount which, taken in connection with a small salary and a wife and two small children, constituted a real sacrifice for all concerned.

Dr. Metcalf's interest in astronomy became prominent during his studies at Oxford and later at Taunton, where he established an observatory of his own. He not only made astronomical observations of great value, but these observations were carried on with telescopes of his own construction. During a very busy life he discovered six comets, a number of variable stars, and forty-one minor planets. In the summer of 1921 he made the really remarkable record of discovering three comets within two days. All of these were independent discoveries to him, although later it was learned that one of them had been previously seen by another astronomer. The remaining two, however, were new. These comets, as well as others, were found by the use of a comet-seeker made by himself.

It was in applied optics, perhaps, that his highest scientific work was done. As an expert in this line he had no superior and probably no equal in this country. He not only computed the curves for his lenses, but he possessed a genius for bringing them to perfection. Altogether he ground many lenses. Perhaps the most notable of these was the sixteen-inch doublet, a photographic instrument which has been in use at the Harvard Observatory for many years. He also constructed a ten-inch photographic triplet, which proved to be an admirable instrument and of great use in the work of the Harvard Observatory. At the time of his death he was at work on a thirteen-inch triplet, the largest telescope of this type ever attempted. It is doubtful whether at the present time in this country there is anyone who can complete the work on this lens and bring it to the degree of perfection which Mr. Metcalf would have achieved.

For his discoveries of comets Mr. Metcalf received five medals from astronomical societies. He was a member of the American Astronomical Society and often attended its meetings. He was a Fellow of the

American Academy of Arts and Sciences. For many years he was Chairman of the Committee to visit the Harvard Observatory, and a member of the Visiting Committee of the Ladd Observatory.

The third interest in Mr. Metcalf's life was associated with the Great War. Soon after the United States entered the conflict, he was granted a leave of absence by his Winchester church and became a Secretary of the Young Men's Christian Association. He sought service at the front, and passed through many scenes of intense physical and mental strain, and placed his life in danger as freely as any soldier. By choice he shared the perils and privations of the privates, and frequently relieved some exhausted man of a portion of his burden. He made heroic and successful efforts at times to get food and other supplies to men at exposed points, and passed nights of wretchedness in dangerous positions within the bombed area. He refused promotion which carried with it greater ease and higher rank, preferring to share the lot of the common soldier. His conduct endeared him to many of his associates. He was cited for special courage at Chateau Thierry. These experiences illustrate not only his patriotism but his love and sympathy for his fellow men. Doubtless, also, he had a certain love of high adventure. From the war he returned home with a different expression on his face, that of one who had looked squarely into the face of death.

Hardly less notable than his achievements in the war were his later journeys and labors in Roumania, where he visited many parts of the country and assumed considerable risks.

Aside from his European travels while on official duties, he made several excursions to Europe, either with his family, or as the conductor of parties containing many of his acquaintances and friends. Besides the duties of a large parish and astronomical studies, he also found time for numerous lectures on scientific and popular topics, and wrote occasional scientific articles and short poems of a religious nature. It is difficult to see how he found time and strength for all these activities, but his energy and enthusiasm were intense. His rest consisted in hurrying from one form of activity to another.

Dr. Metcalf was a frequent and welcome visitor at the Harvard Observatory. When on the track of some new discovery, his enthusiasm was infectious. He had a strong friendship and deep admiration for the late Director, Edward C. Pickering, who in turn had a keen appreciation of Mr. Metcalf's versatile talents. His loss is deeply felt by the members of the Observatory staff. In large measure they share the sorrow of his going with Mrs. Metcalf and their two children, Mrs. Eldridge F. Stoneham and Mr. Herbert E. Metcalf.

Shall the rose bloom anew, and shall man perish?
 Shall goodness sleep in the ground, and the light
 of wisdom be quenched in the dust? Their winter too
 shall pass away; they also shall live and bloom again.
 Beauty shall spring up out of ashes, and life out of death.

Easter Greeting.
 Words by Mr. Metcalf.