

in number, below the median vein, divided by the sub-median nervure and fold, and surmounted by one on the disc larger within the three. Clustered minute linear dots between the sub-costal veinlets at the base, and below them three larger, divided by the discal fold and median vein opposite the cell. A series of subterminal white dots, the three lower the larger. Terminal minute interspaceal dots; fringes white, interrupted. Costal edge white, dotted externally. Secondaries with a broader series of mesial spots, reduced in size inferiorly, a subterminal and a minute terminal series of white spots and dots; fringes white, less interrupted than on primaries. Beneath, the secondaries are whitish, with four series of olivaceous, darkly margined, incomplete and irregular bands. A black subtriangular shaded spot at anal angle. Body whitish beneath, above blackish with longer bluish or greenish hair; abdomen absolutely annulate. The fringes of the female primary are dusky.

Expanse— ♂ 28; ♀ 30 m. m.

OBITUARY.

By the recent death of MR. BRADDISH BILLINGS, of Ottawa, Canada has lost one of her most devoted and enthusiastic sons of science. It has been remarked that the lives of men engaged in scientific enquiries are usually devoid of much interest. The pursuits they follow are not unfrequently above the comprehension, and, consequently, the sympathy of the busy active world. The strife of political partizanship, which engrosses so deeply most minds, has to them little, if any, attraction. Their tastes and habits of thought lead them into other and more congenial fields. The honor or distinction that accrues to them from the successful prosecution of their scientific labors is all they desire. They shun the din and glare of the paths that are generally supposed to lead to fame, content if allowed to pursue their cherished schemes; and hence, when they die, the record of their lives is not usually such as to awaken the interest and excite the attention of the uninitiated outside world. Mr. Billings was no exception in this respect. Leading a quiet and unobstrusive life, and busily absorbed in his favourite pursuits, his name was less known throughout the Province than his high scientific merits deserved. His contributions, however, to the various departments of natural history, we have good reason to believe, were highly appreciated by those most competent to judge of their value,

and more than one foreign scientific society gave his name a place on the roll of their membership. Had he possessed more ambition and been burdened with less modesty, there is scarcely any position in the paths of science to which he might not have successfully aspired. He had what one might almost characterize as a morbid shrinking from publicity. He was out of his element in a crowded room. He loved not the busy haunts of men; but, charmed "by the breath of flowers, he fled from city throngs and cares, back to the woods, the birds, the mountain streams." Much to the regret of his friends, he could never be induced to take prominent part in any public enterprise. As a striking instance of this, and as confirmatory of what is now stated, it may be mentioned that when he was President of the Ottawa Natural History Society—an office to which he was elected as a recognition of his acknowledged ability—he could never be persuaded to preside at any of the meetings. He uniformly, on some pretext or other, always managed to shirk the distasteful duty. Nor did this arise from any want of interest in the proceedings, for he was one of its warmest and most active supporters, and contributed many valuable Botanical and Entomological specimens.

Mr. Billings was born at Billings Bridge, a small village in the immediate neighbourhood of what is now the city of Ottawa, on the 19th of January, 1819. He was descended from a Welsh family that came to America about the year 1740. His grandfather, Dr. Elkanah Billings, after graduating at Harvard University, served for some time as surgeon under Washington, during the Revolutionary War. His father removed to Canada sometime previous to the year 1804, and engaged in lumbering operations on the Rideau River. At this time there was only one house, on the south side of the Ottawa River, within 50 miles of his clearing. The whole of the Ottawa valley was then a comparative wilderness, with few indications of the material prosperity which has since become every where so apparent. It might be interesting to glean some of the incidents connected with the first settlement of this part of Canada, but as this would be foreign to the purpose of this paper, we forbear.

Of the early years of Mr. Billings little need be said; although, by this time, considerable progress had been made by the various settlements that had been gradually formed in this section. Still, as can be easily imagined, he experienced his full share of the trials and hardships incident to a life in the backwoods. Access to books must have been a favor which few enjoyed, and the facilities for education were of the most meagre description.

Accordingly, we find that he was sent to Potsdam Academy, in the State of New York, to prosecute his studies. Here he remained for some considerable period, paying special attention to mathematics, with the view of fitting himself for a land surveyor. He does not appear, however, to have had any special liking for this profession, for he soon gave it up, and betook himself to other avocations. Between the years 1842–52, he held various appointments, such as Clerk of the Crown, Clerk of the Bankrupt Court, Registrar of the Surrogate Court, &c., &c.

In the fall of 1854, he removed with his family to Prescott, where he was appointed General Agent of the Bytown & Prescott Railway. He subsequently, and up to within a short time of his death, held other offices in connection with the same Company. He remained in Prescott until the spring of 1863, when he returned to Ottawa, where he afterward permanently resided. It was while living in Prescott that he began, systematically, the study of Botany and Entomology. These continued to be his favourite branches, although he also gave some attention to Geology and Mineralogy.

Mr. Billings' Botanical collection, which pretty thoroughly exhausted the field around Prescott and Ottawa, consisted of 1897 species, and embraced about one half of the number contained in Gray's Manual. It is now the property of the Ottawa Scientific and Literary Society. His collection of Entomological specimens was also extensive and valuable. Besides contributing to the Smithsonian Institute of Washington, and to various private collections, he presented a large assortment of Coleoptera and Lepidoptera to the Literary and Scientific Society of Ottawa. Considering the very limited opportunities at his disposal, it is surprising that he was able to accomplish so much as he did. His close and unremitting attention to his office duties might have been supposed to discourage him in the prosecution of his favourite researches. But such was not the case. When the day's work was over, it was to him always a source of the highest enjoyment to get away into the country, and hold converse with Nature. He loved not merely the flowers, he also enjoyed the haunts where they are to be found. By the lonely river-bank

"He lingered many summer hours,
Deep in the olden forests he sought the sweet wild flowers."

In later years his attention was mainly directed to Entomology, and to it he devoted every spare hour that chance threw in his way. He was often to be met with, net in hand, in out-of-the-way places, following his

congenial work, and woe betide the heedless buzzing beetle that crossed his path.

Among his contributions to various scientific periodicals may be mentioned the following:—In the *Canadian Naturalist* of February, 1858, and February, 1860, he published a “List of Plants found growing in the Neighborhood of Prescott.” To the annals of the Botanical Society of Kingston, he furnished a “List of Plants growing principally within 4 miles of Prescott, and on Laurentian Rocks west of Brockville, 72 species.” In the transactions of the Ottawa Natural History Society, he published a “List of Plants collected in the vicinity of Ottawa during the season of 1866, consisting of 405 species.” Occasional papers also from his pen may be found in the CANADIAN ENTOMOLOGIST. In Vol. I, pages 28 and 60, he discussed the subject “On a station for *Melitæa Phaeton*,” and in the same volume, page 45, is a paper on “*Diurnal Lepidoptera* observed in the neighborhood of Ottawa during the season of 1868.” Whether this comprises all that he wrote for the ENTOMOLOGIST we are not in a position to say. Writing scientific articles was a kind of amusement he did not much relish, and but for the importunities of his friends, even the few above mentioned might not have been penned.

That Mr. Billings had made for himself a substantial reputation as a Naturalist, is shown by the fact that he was elected to positions of honor by several scientific societies, as a recognition of the valuable services rendered by him to the cause of Natural History. He was the first President of the Ottawa Natural History Society in 1864. In 1866 he was elected one of the Vice-Presidents of the Entomological Society of Canada. When the Royal Botanical Society of Canada was organized, he was one of the original Fellows. He was also a corresponding member of the Entomological Society of Philadelphia, and of the Portland Society of Natural History.

Mr. Billings died at the comparatively early age of 53, on the 29th of September last, deeply regretted by a large circle of warmly attached friends.—COMMUNICATED.

ABBOTT'S NOTES ON GEORGIAN BUTTERFLIES.

BY SAMUEL H. SCUDDER, BOSTON, MASS.

A few months ago, I spent some time over the rich collection of drawings by Abbott, now in the British Museum. Thinking that some of his memoranda may not be unacceptable to the readers of your maga-