

Nevertheless, the book is worth reading as an illustration of the sort of apprenticeship which the really skilled actors of the past were compelled to serve, and is rendered additionally attractive by a number of excellent portraits, some of which are to be found only in the possession of collectors.

An appendix, by Douglas Taylor, contains useful biographical notes of the more eminent performers named in Mrs. Drew's booklet.

*The Life of James Dwight Dana, Scientific Explorer, Mineralogist, Geologist, Zoologist, Professor in Yale University.* By Daniel C. Gilman. Harper & Brothers. 1899. 8vo, pp. 409.

If the study of human character ever becomes a science and it is desired to treat the Man of Science as a distinct variety of the *genus homo*, no better type-specimen can be selected than James D. Dana. He opened up no new intellectual world, as Darwin and, in some measure, Helmholtz, did. Such men are not normal specimens of the Scientist. Nor were his achievements as brilliant, say, as those of Riemann, of Faraday, of Mendelēef. But that was owing to the nature of his branch of science, geology. Dana, the abundantly thorough geologist, he might have been called; the other four epithets of the title-page being swallowed up in this one. In Riemann's science, mathematics, achievement is the easier for the circumstance that only one kind of ability, the pure exercise of intellect, is called for. In tracing the laws of electricity and in other such nomological research, to some mathematical genius (which, as in Faraday's case, need not recognize itself as such) must be added a power of analyzing phenomena, together with those of devising and executing decisive experiments. The discovery of a true classification—a classification which, like Mendelēef's, is to resist the ravages of time—demands all the powers of the nomologist, and in addition a far finer observation—that observation which awakes to the significant thing like a mother to her infant's voice, and seizes upon characteristics which, though they be known and recorded, are by ordinary men passed over without appreciation of their bearing. But to pursue an explanatory science, like geology, with success, one must be provided with all those mental engines and more besides. After all, what is chiefly requisite in classificatory science is to sit down and listen to the voice of nature until you catch the tune. But concerning causes nature is not communicative. They are the secrets of the sphinx. She will vouchsafe no more than a terrible monosyllabic "no" to one guess after another whose making may have cost lives. The invention of the right hypothesis requires genius—an inward garden of ideas that will furnish the true pollen for observation's flowers. And the framing of the hypothesis is merely the preparation for the main work of verification—of pressing Nature with question upon question until she is forced to a tacit confession; a work demanding the most varied powers, above all that kind of observation which is called "shrowd."

Dana, for example, not only showed himself a good technical mathematician in his treatment of crystallography in the fourth and earlier editions of his 'System of Mineralogy,' but also was able, in an untechnical

way, to produce a mathematical analysis of problems arising in geology. He early showed an aptitude for chemistry, and published two papers upon cohesive attraction, a subject inviting only to a man of nomological ability. One of the deepest-going exhumations of his research, the law of cephalization, belongs to this division of science. In two classificatory sciences, mineralogy and zoology, his superiority was acknowledged. In geology, while he would be the last of men to neglect details, yet his eye was always turned to the greatest problems—such as the permanence of continents and oceans, the general state of the earth's surface as a whole at different epochs, and the like. He always generalized. His studies included the moon as well as the earth, and he looked upon geological history, as a type of evolution in general, or progress from the homogeneous to the heterogeneous.

Dana pursued the most difficult of the sciences, barring none, in a more thorough and comprehensive manner than any other man of his generation. At any rate, he and his scholars have made America the headquarters of geology. But that which, above all, renders Dana the type of the scientific man in general, taking physicists and psychologists (*i. e.*, psychologists, anthropologists, archaeologists, philologists, historians, etc.) together, is that whatever matter seriously engaged his intellect, that he must study with the most systematic and laborious dredging. The inevitable effect of this is to bury a great part of the man under drudgery, so that the narrative of his life requires an intelligent running commentary to bring out the interest of it. For Dana, especially, whose habits were formed before the days of typewriters, and stenographers, and the other paraphernalia of modern wealth a man who himself travelled to the post-office several times a day, and managed with such poor means, as college professor, before the war had at their command—this is peculiarly true.

The great amount of drudgery in Dana's life has, perhaps, given President Gilman the impression that his subject was not a very interesting one, or, at any rate, has led him to lose no opportunity of inserting matter that does not relate to Prof. Dana. Such are an extract from a sermon by Jowett about the universe, two of the three chapters on the United States Exploring Expedition, sketches of other officers of Yale College, an account of the foundation and early history of Silliman's *Journal*. We are willing to admit that it was the biographer's duty to show how the promoter, the author, of the United States Exploring Expedition, which went far to redeem America's reputation, being too single-hearted a man to blow his own trumpet, has been allowed to fall into oblivion, after the custom of republics, so that biographical dictionaries hardly know the name of John N. Reynolds. The other insertions, too, are decidedly interesting in themselves. Could they not have been compassed without creating the impression of fleeing to them for relief from the dryness of the main matter? We will say no more on that head. We might perhaps have excused ourselves altogether from adverting to the degree of literary mastery employed, on the ground that the book is nearly made up of excerpts, and that those excerpts are very well worth

reading. It is also fair to consider that the task of preparing this biography was one not sought by the author, and which he could not well have declined, remote as are his own occupations from those of the geologist. His well-known sympathy for science and scientists made it natural to select him rather than another friend for this office.

The book is pretty enough. To some eyes it would have been more so had there been somebody to see that the number of portraits of Prof. Dana the volume contains were rightly counted, that the names of persons mentioned, such as Benjamin Peirce and Daniel Huntington, were always correctly given, and the like. It is difficult to believe that one of the De Saussures made a mistake in French for every three lines of print his letter fills, or that Milne-Edwards should have doubted this proportion. But these are symptoms of a brief transition period in the history of a great publishing house, for which all readers must be inclined to kindly indulgence in remembrance of the benefits and pleasures of the past.

*Abraham Lincoln: The Man of the People.* By Norman Hapgood. Macmillan. 1899.

So many lives of Lincoln have been written heretofore that for the existence of this one there does not appear to be any good and sufficient reason. It does not, of course, invite comparison with the elaborate historical biography of Nicolay and Hay, but, among the shorter lives, there are some that should have given Mr. Hapgood's biographical ambition pause. Carl Schurz's study-sketch would leave a stranger to the life and character of Lincoln better informed as to his genius and performance than Mr. Hapgood's 432 pages. But Mr. Hapgood's deliberate appeal is to a different judgment and taste than were met and satisfied by Mr. Schurz and by Mr. Morse's volumes in the "American Statesmen" series. We have had "The True George Washington" and "The True Benjamin Franklin," and we have here, very much in the manner of those doubtful ventures, the True Abraham Lincoln; the idea being that the true man is the man in his most ungrit and careless moods, the man displaying his seamy side, if he has one, with the least possible reserve. Others have done this before Mr. Hapgood, notably Lincoln's friends Herndon and Lamon; but their books were *mémoires pour servir*, and as such have been useful to the more elaborate biographers. Similar was Whitney's "Life on the Circuit with Lincoln," in which Mr. Hapgood seems to have found more plums for his pudding than elsewhere. Upon all these books Mr. Hapgood has drawn freely, especially upon their stories ascribed to Lincoln and their admissions of his addiction to political methods which "the purists" (as Mr. Hapgood habitually calls those who like the cleaner kind of politics) cannot heartily approve. The stories are generally good, and Lincoln's vivid application of them to particular occasions was even more remarkable than the fulness of his repertory. The most of them appear to be well authenticated, and others of more questionable shape could easily have been raked together. For all his frankness, Mr. Hapgood has stopped short of the most absolute sincerity. That is a very interesting comparison made by Mr. Rhodes in the recent fourth volume of his history. He says, justly, that Lincoln is generally agreed to