

One has not to be an old man to recall the time when a young woman who was a college graduate was looked upon as a singular phenomenon. Now, in families in which it is regarded as a matter of course that the young men shall go to college, the sending of the young women to college is looked upon as just as normal and natural. The question of women's intellectual ability to pursue college studies has completely lapsed; nobody ever raises it nowadays. Indeed, the time is not distant—perhaps it is already here—when persons of the younger generation will have to be told as a mere matter of history that such doubts were ever entertained. But one does not have to go back anything like fifty years to remember the difficulty with which the opening of women's opportunities in university, as distinguished from college, work was attended. Gradually, but steadily, there has come recognition of the fact that there are women—comparatively few in number, it is true, but the same is true of men—who are gifted both with the intellectual power and the intellectual aspirations that go to the making of scholars and scientists, and that these should have the opportunity to develop their talents.

Not the least important aspect of the influence which has come from the founding of Vassar College, and of its successors at Northampton, Wellesley, Bryn Mawr, and elsewhere, is that which has been exercised on the other side of the Atlantic. Girton and Newnham came well after Vassar, and the opening of the German universities to women was largely the result of the desire of American women to avail themselves of the opportunities of those great institutions. The kindness, the liberalism, or the appreciation of special worth, shown by one or another of the great German professors, was, as a rule, the entering wedge; later what had been a special exception became the rule. How entirely unfamiliar in Germany was the idea of the American women's college, even as lately as a score of years ago, may be illustrated by a little incident. A young German scholar of distinction had been appointed professor in one of the best of our women's colleges. A former colleague of his had heard of the appointment, and, speaking to an American visitor, expressed his surprise that such a man should have been willing to accept a position in a *Höhere Töchterchule*! When informed that the "*Töchterchule*" in question had standards of admission and instruction approximately the same as those

of Harvard College, he was utterly amazed. In the field of women's education at least, America may say that she has been a leader.

DANA AND OUR LITERATURE OF THE SEA.

The centenary of the birth of Richard Henry Dana, observed this week in Cambridge, brings to memory a type of minor author which we are too prone to forget. Dana is part of the anti-slavery history of his time, and on that aspect of his life Moorfield Storey was asked to speak. He had a distinguished career in international law, which was dealt with by Joseph Choate. He was of robust personality, and Howells and others have amusingly recalled the gusto of his public life and of his stories of the West. But his claim to immortality is based upon his masterly depiction of sea-life; and as it constituted his single book, even those who have read it with the interest it always holds are likely to underestimate his literary prominence. Historically, this is considerable. His "*Two Years Before the Mast*" carried the American name farther and wider than any other work except that of Irving and Cooper during decades in which our writers were very generally despised. More than a half-century ago it was read in England as of the stuff of the classics. Intrinsically, his book will never lack discriminating applause, whether it flags in the popular esteem or not. William Clark Russell is said to have called this production of a youth the most memorable of all contributions to the literature of the sea, and readers of Jack London may remember a recent dictum of his that when Marryat and Cooper have gone to dust, still there will remain Dana.

There is a sound reason why Dana, unlike Herman Melville, Cooper, Nordhoff, London, and other of our writers of the sea, was a "one-book author." His "*Two Years Before the Mast*" was a masterpiece, not because Dana was an imaginative genius, but because he was able and sober—clear-sighted, hard-headed, and self-controlled, with a nervous style to put down what he felt. With his nineteen years he brought to his voyage a trained mind and a fresh vision for the graphic details about him. For all his sense of the value of concreteness, dialogue, movement, and climax, there is never suspicion that he draws the long bow—and there is evidence that he lacked any faculty for doing so. Melville's

"Typee" and "Omoo" are the best examples of actual sea-experience embroidered by sentiment and imagination. And beyond doubt Dana was even less capable of telling an ingenious and crowded narrative, of the kind Marryat and Cooper wrote. His power of showing in photographic detail the hoisting of the hides, the tarring of the rigging, the holystoning of the deck, the sailors' off-hours' occupation of making spun-yarn, was intimately connected with the poise which kept him safely out of such episodes as the brutal flogging of his mates off San Diego, and which made a prolonged voyage with the roughest of men a tonic and nothing else to his character. His shrewdness made picturesque his descriptions of character, and the faithfulness of his chronicle did not prevent his seeing the high lights in a fight, a fandango, or a ship's race; but it is significant that he saw but one beautiful or romantic spot in California. He tells us in a postscript "twenty-four years after" that his book had been used as a guide by all the flood of forty-niners, and its business-like simplicity would justify such a use.

Would it be possible to add to our sea-literature a modern picture in the mode of "*Two Years Before the Mast*"? It could not be done; and in the fact that the seafaring conditions of Dana's time have utterly passed away will hereafter lie his book's chief attraction. He struck the sea at the moment when its speedy clippers, its domineering captains, its dashing voyages to lands all but unknown, its speculative elements, its grim-fisted but hard-working sailors, gave it its greatest glory. The dirty Tyne traders of Masefield, the oil-tankers, the steady-going liners, the slow and sober type of sailing ship, are nowhere beside the ships of the thirties. Vessels, at the behest of admiralty courts, trade congresses, and underwriters, are no longer built for a crack pace. Instead of a gambling on dare-devil ventures, profits are calculated to the fraction of a cent, and runs are controlled to a knot by cables reaching every port. Sea-writers lament that crews have become simply a class of manual laborers, and that peril and distance no longer lure boys from the farm and office to the ocean. On Dana's voyage the old tars talked with wonder of the *chro*-nometer, the *chre*-nometer, and the *the*-nometer in the captain's cabin; and the first not working well on a single trial, it was discarded for the old-fashioned dead-reckoning. The tar and slush, the hand-windlass and pea-jacket, are gone as far as are half of the very nau-

tical terms Dana uses, or as the pirate, with "a black hull, armed, and full of men, and showing no colors," which chased the *Pilgrim* a whole September day and night.

There is thus a certainty that our books of the sea must depend increasingly for interest and value upon character and plot; that they will be of the school of Conrad, Kipling, Russell, and London; and that Dana's narrative will maintain a fairly undisputed precedence not merely for its high literary merits, but because its subject-matter sets it apart. He could write but one such book, and a second could no more be written now than a second "*Oregon Trail*." A people not of seafaring character should recall with satisfaction that it is an American who is credited with it—that England once paid us the compliment of distributing a copy of an American book to every sailor of her fleet.

FASCINATING SCIENCE.

Probably none of the men who have labored to make natural science interesting has so combined passionate curiosity, endless patience, and life-long enthusiasm for an ideal with an instinct for literary form as did Henri Fabre. So fast has the reputation of his books grown in the last few years that it is hard to comprehend that, though his first important entomological work appeared in 1855, a half-century later he was all but unknown. The ten volumes of the "*Souvenirs Entomologiques*" are a scientific series for which we have to go back to Buffon for a parallel. Yet not till after 1910 did the Institute crown them and the French Government grant him a pension. His early life was one of severe poverty; he endured constant snubs as a teacher and keeper of a museum at Avignon; and when rescued from his worst financial straits by John Stuart Mill, he went back to the life of a small agriculturist. Not even his casual services to Darwin brought him notice. His discovery we owe to Maeterlinck, himself author of an imitative life of the bee; and Maeterlinck's essay on "*The Insects' Homer*" was followed by a wave of international interest. Fabre's translator, A. T. De Mattos, doubts that the Anglo-Saxon world five years ago contained a thousand people who had heard Fabre's name, but since then a half-dozen of his books have sold in repeated editions, and new issues are still appearing.

The fascinating way in which Fabre de-

picted the life of the insects has been the admiration of naturalists; yet it was a natural result of the method in which he set out to observe that life. With the dryness of the schools he had no patience. He was constantly appealing to the intimacy with which he lived beside his insects to refute the critics who thought that a page that was read without fatigue could not be an expression of the truth. His impatience with literary dullness rose from his impatience with dull methods of observation. His colleagues ripped up an insect and turned it into an object of horror and pity, whereas he studied it alive and caused it to be admired; they labored in a dissecting-room, he under a blue sky; they subjected cell and protoplasm to chemical tests, he studied instinct in its farthest ramifications. Both methods are necessary, but his alone turns science into literature. "If I write for men of learning who will one day try to unravel the problem of the insect mind," he declared, "I write also, I write above all, for the youthful. I want to make them love the natural history that others make them hate; and that is why, while keeping strictly to the domain of truth, I avoid the scientific prose which too often, alas, seems borrowed from some Iroquois idiom." He made the discovery that the insect world is one of such strangeness, grotesqueness, and even terribleness that a close recital of the doings of its inhabitants revealed almost a new universe; and he was willing to give days and nights of acute inspection and quick comprehension to its weird occurrences. In volumes devoted, one after the other, to the Spider, the Fly, the Ant, the Bee, the Beetle, and Weevil, the Wasp, the Grasshopper and Moth, and the Scorpion, he justified Darwin's praise of him as "the incomparable observer."

Readers of "*Walden*" will remember the description of the battle of the ants on the chip pile. The panorama which Fabre spreads out is a series of such engrossing pictures. We are introduced to the newborn blue-bottle fly, the pulsations of its forehead and eyes becoming the instrument of its deliverance as it pushes up through the rubbish; to the larva of the rose-chaffer, which with legs on its belly always crawls on its back; to the praying mantis, the frightful aspect of which, in the "spectral attitude," deprives its victims of their power of movement; to the female scorpion, which devours the male in the act of mating. There is the heuscospis, which arms itself with horn and shield to slay its younger

brothers and sisters in their cradle; the *Tachytes* and *Ammophila*, possessed of such anatomical knowledge that, as they wish to paralyze or kill their prey, they know exactly which nerve-centre to strike; the tarantula, her cave two perpendicular passages connected over a narrow ledge, on which she awaits her prey; the *Eumenes*, who makes of her stronghold a museum adorned with shells and translucent quartz. There is an account of such marvellous faculties as that of a species of wild bee which, housing its eggs in honey-pots cut from leaves, and working in darkness underground, knows precisely of what dimensions to cut the lid-disk so that it will fit in and yet not smother the eggs by sliding down on the honey. His retirement at Sérignan, near the home of that other venerable Provençal figure, Mistral, afforded him the leisure for his close and toilsome vigils beside his insects. His brief narrative of the slow progress of the scarab with its ball, to its chosen retreat, its vicissitudes, its struggles with its rivals, and its eventual success, for example, is a concentration of the watching of weeks. In his chapters on the scorpion he himself tells us of how frequently he had himself roused at midnight to seize an opportune moment to watch its actions, and held his station till dawn. But it would be unjust to emphasize exclusively Fabre's observation, his scientific minuteness, and his powers of picturesque narration. He had an ingenuity in formulating hypotheses as great as the chemist's or physicist's, and he had an analytical mind which met successfully multifarious problems of environment, of anatomy, of the origin of species, and of instinct and intelligence.

The enthusiasm with which he labored was an animating force to which penury, misunderstanding, and obscurity were nothing. He was on the track of truth; he found, as he put it, every year "a few grains of sand on the shore," and that was reward enough. His life and monumental work are the most eloquent rebuke to the sort of pseudo-naturalist of which this country has seen so much in recent years—the nature fakers who, with something of Fabre's regard for interest, but none for accuracy, imposed spurious analogues to human society upon the animal world. While science always needs workers who must seem abstracted and dry to the layman, its more open aspects will require men like Fabre, who find in them a life so full and vivid that they cannot but write of it with vitality and glow.