

GOSSE

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A Century at the Seashore.

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# A CENTURY AT THE SEASHORE

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UNTIL a hundred years ago the seashore, with all its myriads of nameless creatures, had been left to itself. It had remained, almost since the beginning of time, as Sir Edmund Gosse described it:

The rocks between tide and tide were submarine gardens of a beauty that seemed often to be fabulous, and was positively delusive, since, if we delicately lifted the weed curtains of a windless pool, though we might for a moment see its sides and floor paved with living blossoms, ivory white, rosy-red, orange and amethyst, yet all that panoply would melt away, furled into hollow rock, if we so much as dropped a pebble in to disturb the magic dream.

To be sure, naturalists had known of this vast and lovely province of nature since the days of Aristotle, that first great seashore observer, and there had always been collectors of such conspicuous things as sea shells and starfishes as well as fishers of crabs and cockles for the market place, but in all those hundreds of years between Aristotle and the early years of Victoria's reign there had been no general pillage of the seashore.

Today, however, there is no longer peace at the seashore, except, paradoxically, in areas which have been restricted in wartime. The "unravished bride of quietness" has been ravished by those very ones who profess to love her most, the nature lovers and the zoology students. Armed with handsomely illustrated books, buckets, bottles, and enamel pans, they descend upon the shore left undefended by the recessed tide, and scrape its creatures from their rocky homes and dig them out of their crevice refuges. Reefs which have been particularly favored by the complicated circumstances of time, tide, and temperature, have suffered the most, especially if they are near cities, and it is the perennial lament of the teacher who guides another ravaging horde to a choice "collecting ground" that the beach is no longer as it used to be ten, fifteen, or twenty years ago. Perhaps there has been, he suggests, a shift in the ocean currents, and the rarer creatures have been obliged to seek some more favorable spot.

It may be unfair to accuse any one person of bringing this lamentable state of affairs to pass, but if we trace the development of seashore study, at least as an amateur pastime, to its beginnings, the most influential name we find is that of Philip Henry Gosse. There are others, notably Louis Agassiz, who discovered the seashore shortly after his arrival in America in 1846, who did their share in promoting the study of the seashore, but it is Gosse who seems to have inspired the greater part of the host of dilettante and amateur collectors who have invaded the beaches in the past hundred years.

As his son Edmund tells us in *Father and Son*, that inimitable psychological "study of two temperaments":

The fairy paradise has been violated, the exquisite product of centuries of natural selection has been crushed under the rough paw of well-meaning, idle-minded curiosity. That my Father, himself so reverent, so conservative, had by the popularity of his books acquired the direct responsibility for a calamity that he had never anticipated, became clear enough to him before many years had passed, and cost him great chagrin.

Philip Henry Gosse, the man who, in the words of the Reverend Charles Kingsley, himself the author of *Glaucus*, an immensely popular seashore book, did "more for the study of marine zoology than any other . . . man," happened to take up his calling of popularizing the seashore by accident. It was in 1843, just after Sir James Ross had returned from his Antarctic voyage, and when the theories of Edward Forbes about the distribution of life in the sea were much in the minds of professional naturalists. Gosse, then 33 years old and author of a not too successful book, *The Canadian Naturalist*, was engaged in writing a general zoology for the Society for Promoting Christian Knowledge when an illustrator named Whimper suggested that a book about the ocean might find a ready sale. The project appealed to Gosse, and some time in the following year he completed the book, and it

appeared in 1845 while he was in Jamaica on a collecting trip.

This book, *The Ocean*, is the first of that long series of volumes, many of them lavishly illustrated, on the wonders and mysteries of the deep. It is a rare secondhand bookstore that does not have two or three of these in stock—the recent ones, prepared for this more sophisticated age, cannot compare with those older volumes, crammed with woodcuts and fascinating stories of everything from the unfathomable mysteries of the great abysses to the elusive Flying Dutchman. Sea serpents, of course, received extensive mention. But it is vain to attempt to describe one of these wonderful books. The eager reader is advised to seek them out in the dustier recesses of a secondhand bookstore.

Gosse not only set a new style in books but also changed his own life, for he was the first person to be influenced by his own book. The interest in marine zoology he had acquired while preparing *The Ocean* led him to further studies, and in a few years he published his *Naturalist's Rambles on the Devonshire Coast* (1853), which is an account of the manifold attractions of the seashore, beautifully illustrated by his own drawings. Since the appearance of this book it has become the tradition for writers on seashore life to be their own illustrators, but in precision of detail and brilliance of color Gosse's illustrations for the *Devonshire Coast* have seldom been equaled in any work, whether it be a scholarly monograph or popular handbook. The book not only established Gosse's reputation as an interpreter of the life of the seashore, which was eventually to earn him an F. R. S. to attach to his name, but also it almost immediately started a new fad in parlor amusements, the marine aquarium. Perhaps it was this fad which had as much to do with the ravishing of the seashore, which his son was to deplore fifty years later, as the more conventional gathering of crabs and sea shells for the collector's cabinet. In one season alone Gosse himself collected more than 4,000 specimens for exhibition in his aquaria at museums. Gosse was also the first, at least in England, to hold natural-history classes on the seashore.

Of course, this interest in seashore life was not entirely inspired by Gosse's books and activities. Edward Forbes, the Manx naturalist, also was a familiar name to amateur naturalists through such works as his charming *History of British Starfishes* (1841) and his posthumously published *Natural History of the European Seas* (1859). But we remember Forbes primarily because of his great mistake, his theory that animal life did not exist in the ocean below 300 fathoms. This error, together with his



PHILIP H. AND EDMUND GOSSE  
FROM EDMUND GOSSE'S BOOK *Father and Son*.

pioneer classification of marine life by zones, stimulated dredging activity by professional and amateur alike off the shores of Britain, Norway, and the eastern United States.

Although it would be difficult to prove such a supposition, it seems probable that Forbes and Gosse were more responsible for that first great oceanographic expedition, the voyage of the *Challenger*, than posterity has seen fit to acknowledge. Certainly these two men, as diverse in character and personality as it is possible to imagine, stimulated the large followings of British natural-



EDWARD FORBES

FROM WILSON &amp; GEIKIE'S LIFE OF EDWARD FORBES.

ists which were to encourage and support the *Challenger* Expedition.

Edward Forbes was not so fortunate in his biographer as was Philip Henry Gosse, and as a result his personality has been lost in the arid bypaths of the history of science.<sup>1</sup> Of Gosse's almost pathological Calvinism, his fantastic efforts to reconcile his own literal interpretation of God's Word with the fossil record, as expressed in that odd book *Omphalos, or The Geological Knot Untied*, which so shocked Charles Kingsley that he protested that if anything could make him doubt God's wisdom it was that book—of these things, and what they meant to a sensitive, growing boy, we have a beautifully written record.<sup>2</sup>

Edward Forbes, on the other hand, was a completely charming character. Indeed, he was one of the most delightful personalities that ever graced the solemn halls of science. During those years when Charles Darwin was patiently studying his barnacles every morning and Thomas Henry Huxley was cruising off Australia in H.M.S. *Rattlesnake*, Edward Forbes was the great name on the roster of British naturalists. When anything was afoot, it was Forbes who was consulted, and his approval was eagerly sought

by the younger naturalists, including Huxley. Gosse, on the other hand, was a lonely and solitary man, especially after the cool reception—or lack of reception altogether—accorded to his *Omphalos*. Friendship, for a man so beset by his own thorny theology, was difficult at best, and even his intimacy with the genial and easy-going Forbes was a short-lived affair.

Forbes never forgot that he was born on the Isle of Man. If he did not believe in the Little People, he was at least very considerate of their feelings. Gnomes, leprechauns, mermaids, and nymphs frequented the margins of his student notebooks and occupied conspicuous places in the chapter headings and tailpieces of his monograph on starfishes. During scientific meetings his long fingers were always busy drawing caricatures of the speakers or writing accounts of the meeting in humorous verse—with dubious rhymes—to be read later at his own Red Lions Club. His tall, thin frame was accentuated by long hair which hung loosely below his ears, and his deep-set eyes and broad mouth betrayed his Celtic ancestry. Forbes died in 1854, shortly after he had gained the chair of natural history at Edinburgh for which he had waited so long and impatiently. Though he was busy in his chosen field for most of his forty years, Forbes left no extensive monument of books and papers behind him. His influence was felt primarily through personal contact and lectures. His oft-expressed theory that the distribution of living animals and plants could best be understood by comparison with related fossil forms entitles him to an honored but seldom acknowledged place as one of the founding fathers of paleontology.

Forbes was less fortunate than Gosse in his family. Gosse, like Henry Moseley, the mathematician of sea shells and designer of battleships, whose son was H. N. Moseley, naturalist of the *Challenger*, and whose grandson was H. G. J. Moseley, the brilliant physicist who was killed at Gallipoli, and like Thomas H. Huxley, founded one of those three generation dynasties which have contributed so much to British science and culture. For Gosse's son Edmund, in spite of his being raised in a home where Shakespeare was frowned upon as frivolous, be-

came one of "the most understanding and sympathetic interpreters of literature," and his grandson Philip is a recognized authority on radium as well as the author of several books about piracy. Forbes had two children, but neither the *Dictionary of National Biography* nor those concerned with the later misadventures of Mrs. Forbes—including the usually exhaustive William Roughead—have found them worth mentioning. For in 1858, four years after the death of Professor Forbes, his widow contracted a marriage which, to put it mildly, was unfortunate, and the subsequent turmoil may have been the prime factor in denying a line of Forbeses to British science. The man Mrs. Forbes had the misfortune to marry was one William Charles Yelverton, who, it seems, had already informally married himself to a Miss Longworth under circumstances of questionable legality. During the ten years controversy over this marriage, which included debates in the House of Lords, poor Mrs. Forbes and her two children became the innocent and forgotten bystanders.<sup>3</sup>

CONTRARY to the impression which might be gained from a glance at the shelves of a well-stocked library, there have been relatively few good books on the seashore and marine natural history since Gosse's day. There has been no dearth of hack works, many of them charming in an unconscious way, and of serviceable manuals for amateurs, but within the rigid limits of the genre Gosse has had no successful imitators until the past twenty years. Two of the best are *The Seas*, by F. S. Russell and C. M. Yonge, and D. P. Wilson's *Life of the Shore and Shallow Sea*. Both of these are by members of the staff of the Marine Biological Association Laboratory at Plymouth. These two books satisfy the three essentials for a book of this type: that the author should be a recognized authority, that he should illustrate the book—at least in part—himself, and that it should be written in language accessible to the layman. A further desideratum, suggested by the influence these books have had on seashore collecting, might be that they should inspire respect for life and discourage idle collecting while at the same time arousing interest.

Unfortunately, such sentiments are rarely expressed.<sup>4</sup>

Although the Woods Hole Marine Biological Laboratory antedates that of Plymouth by several years and has established an honorable tradition of marine research in America, no member of its staff has prepared anything comparable with the two recent English books. Some explanation for this may lie in the very size of the United States, its diverse ocean fronts, and the reluctance of commercial publishers to venture on projects which have only local interest, but none of these possibilities is altogether valid since at least two fine books, both of them about the Long Island shore, have been published in recent years. These are William Crowder's *A Naturalist at the Seashore* (1928) and H. J. Shannon's *The Book of the Seashore* (1933). The authors are both accomplished illustrators but are essentially amateur naturalists.

Only on the Pacific coast has a book appeared which might be considered to stand in the high tradition of English popularization. This is *Between Pacific Tides*, by Edward F. Ricketts and Jack Calvin (1938). Though intended as a handbook for seashore animals of the Pacific coast, its readable style and approach to the problem by zones instead of zoological classification raise it far above the usual status of a handbook. This book has a sort of sequel, *Sea of Cortez*, by John Steinbeck and Edward F. Ricketts, which is something else again. Many have found its narrative half too philosophical for their tastes or have objected to the philosophy on its own merits.

But it is not these books alone which send students and dilettantes to the seashore to continue that pillage which Gosse did so much to inspire less than a hundred years ago. Indeed, such books are probably not consulted until interest has already been aroused in some other manner. This has been more true, perhaps, in America than in England, where, despite the paucity of good seashore books, the coasts of Massachusetts and California have been as effectively raided as that of Devon, and the primeval beauty of the seashore is no more. It is no less a personage than Louis Agassiz who must be blamed for a large share of

the impetus which sent well-meaning despoilers to the shores of the North American Continent. Like that of Forbes in England, the influence of Agassiz has made itself felt through teaching and the inspiration of teachers rather than through the writing of books, and the precept "Study nature, not books," which he posted on the wall of America's first seaside station at Penikese in 1873, is still fresh in the minds of American naturalists (now called biologists, or worse still, ecologists), professional and amateur alike.

They have indeed studied nature instead of books, although some of them seem to have conducted their studies solely for the purposes of contributing rather dull and detailed monographs, if not the writing of books. Looking over the first hundred years of the books—seaside companions and vade mecum, as few as they are, one is tempted to deny that there is any need for newer and better books about the fascinations of the seashore and its creatures. The writer, himself an ardent student of one type of littoral creature, whose numbers he has persistently reduced on every occasion he has visited the beach, and furthermore the author of some popular articles which may have done their own small part to promote that same enthusiasm he now deplors, fully realizes that he is not without sin. Yet up-to-date manuals of seashore life are badly needed, even at the peril of further ransacking of the tidepools. Of course, it might be argued that an obsolescent manual or quaintly outdated book—for example, perhaps, one of Gosse's—stimulates more intensive collecting, and that a complete manual might eliminate the necessity of excessive collecting in the hope of finding uncatalogued rarities.

There seems to be no way out of this dilemma; certainly G. K. Chesterton wrote no truer paradox than "The man who is most likely to ruin the place he loves is exactly the man who loves it with a reason."<sup>15</sup> Such a thought could not have occurred to Aristotle on a visit to the shore in those remote golden days before Everyman became his own biologist, carrying a bucket to the beach, for Aristotle, while not much of a

poet himself, had a taste for Homer and loved the sea with emotion as well as reason. The unkindest slur against that great man's name is the fable that he ended his life by throwing himself into the sea because he could not understand the currents in the Strait of Euripus.

We cannot expect a generation of Aristotles, but it does not seem too much to hope for that our biologists, readers and writers of books alike, will go down to the shore, not in the spirit of treasure hunters, but as poets in spirit and as students of living things instead of specimens in bottles, even if the Homeric phrase does not ring in their ears as it surely did in those of Aristotle:

παρὰ θίνα πολυφλοίσβοιο θαλάσσης.

#### NOTES

<sup>1</sup> In addition to *Father and Son*, Edmund Gosse wrote an earlier, more formal biography of his father, *The Life of Philip Henry Gosse* (1890). The only biography of Forbes is *Memoir of Edward Forbes, F.R.S.*, by George Wilson and Archibald Geikie (1861). It suffers from being the work of two hands, neither of them skilled in biography.

<sup>2</sup> It is not without its note of irony that Gosse, the author of *Omphalos*, a book which argued, among other things, that the fossils were created *in situ*, was also the originator—or most ardent proponent—of the theory that the sea serpent is a living *Plesiosaurus*.

<sup>3</sup> Cf. William Roughhead, *The Evil That Men Do*, vol. 2, "The Law and Mrs. Yelverton," pp. 469-505 (Crime Club, 1929). Perhaps it should be mentioned that H. O. Forbes (1851-1932), author of *A Naturalist's Wanderings in the Eastern Archipelago*, was the son of the Reverend Alexander Forbes, and presumably no relation to Edward Forbes. Forbes's son was born in 1850, but we do not even have his name.

<sup>4</sup> The works of William Beebe, and Rachel L. Carson's *Under the Sea Wind* (1941), are not, strictly speaking, books about the seashore, nor are they illustrated by their authors. Miss Carson's book is further disqualified, by my standards, because it gives names to creatures after the manner of Thornton W. Burgess and is mired down in too many purple patches.

<sup>5</sup> G. K. Chesterton, *Orthodoxy*. Ch. V, "The Flag of the World."

The following vignette is from the title page of Forbes' *British Starfishes*.



*In Triton's shell the echoing sea  
is but the mirrored surge of sound  
within the distant hallways of the ear,  
and time the shadow of a thing unfound.*

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