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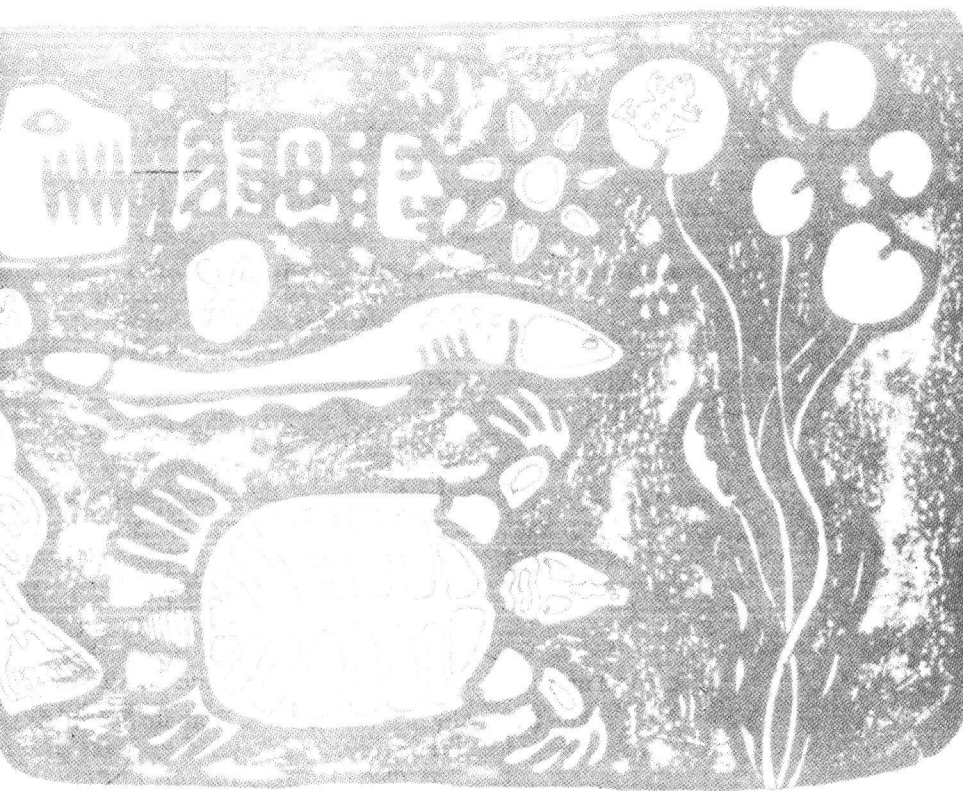
LOUIS AGASSIZ

A LIFE IN SCIENCE

EDWARD LURIE / abridged edition

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LOUIS AGASSIZ

A LIFE IN SCIENCE



BY EDWARD LURIE

PHOENIX BOOKS



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LOUIS AGASSIZ: A LIFE IN SCIENCE



Dedicated to the Memory of

ALEXANDER LURIE

who loved men, ideas, books, and nature

PREFACE TO THE PHOENIX EDITION

THE OPPORTUNITY to offer a postscript to my assessment of Louis Agassiz enables me to share reflective insights that, I hope, will heighten appreciation of the life in science portrayed herein. These emphases are by way of points of exclamation or additional scope, because I am satisfied at least that the picture of Agassiz as I have drawn it remains valid. My own viewpoints and attitudes about Agassiz changed as I studied and wrote about his life, and I am certain, therefore, that were I to do this biography again it would be a different book. That distinction would quite probably reside in matters of treatment and special interpretation that would influence form but not content. I should like, then, to illuminate some colors on the canvas, tell something about its composition, and point to some aspects worthy of deeper hue.

One aspect of Agassiz's life requiring further attention relates to his career in Europe. In this context, the inner history of the life sciences, the character of higher education, and the nature of institutions of science and learning in the early nineteenth century are all themes that could bring new insights to the study of Agassiz's career in the United States. This is especially true of European institutions of science and learning, as Agassiz frequently cited these as models to which American culture should aspire. Agassiz's personal relationships in the key decade prior to his arrival in Boston in 1846 are still another realm worthy of greater attention.

This is the more so because Agassiz's private life, the range of his relationships with friends, family, and colleagues are central to understanding the sources of intellectual aspiration and accomplishment.

The complex unraveling of the web of Agassiz's personality and personal existence—both in Europe and the United States—is in fact the central problem of his biography. I should have preferred to have more “evidence” on which to base my interpretations of this singular man, but, even were I so fortunate, I am certain that such data would not have differed much from what I had to work with and would have also borne the impress of the enigma that was Agassiz. By this I mean that the man himself represents the greatest obstacle to the quest to understand him. I suppose this is true for most biographers, but I cannot help thinking that in the case of Agassiz, the situation of his personal life and the social conditions surrounding it is not conducive to the usual appeal to reliable data. Inevitably, my evaluations are often inferential and intuitive, and their subjectivity obviously bears the signs of the effect of Agassiz's style of life on the special values of one studying it. But this problem is deepened by the situation that Agassiz rarely allowed a private view of himself. It was as if he lived on a vast stage where he was the dominant actor, resplendent in a special costume and grease paint selected for a special occasion. How, then, pierce through these masks and costumes to depict the reality behind appearances? This problem is evidenced in the personal documents that remain for posterity to ponder. Only rarely does a private reflection shine through such letters. Agassiz left no diary or autobiography, and the words and remembrances of contemporaries reflect a high degree of partisanship because Agassiz was so often and so deeply involved in controversy.

In fact, this same dilemma was shared by many of Agassiz's contemporaries, who often suspected that a public stance was not to be taken at full value yet who were denied a glimpse of the inner nature of heart and soul. This student of nature was often misunderstood, and this incomplete insight was as blinding to his contemporaries as it is an obstacle to our understanding. The range of reactions of Agassiz's students and close colleagues testifies to this

aspect of his life, one that was consistent in Europe and America. The first blush of contact with the man determined to be the "first naturalist of his time" was always the opening chapter of a romance. The loved one represented the epitome of virtue that could only be aspired to; his every word and action were singular; he led others as a piper through the wilds of nature so as to master its secrets. Such was the form, moreover, of the consistent popular image of Agassiz and this remained a constant theme during his life, making it the more difficult to discern his actual significance for culture and science. But, unlike the enraptured public, Agassiz's students and coworkers soon discovered that the object of their love was mortal after all. Unable to possess the loved one entirely and claim him for their own, this unrequited passion calmed. But just as Agassiz could never be a neutral figure, neither could reactions to him remain placid. The original emotion was soon replaced with distrust, disaffection, and disavowal that equaled and even surpassed the force of the first appraisal. As in romance, the passing of time often saw old controversies forgotten, former passions quieted, and old animosities pale so that toward the end of his lifetime and in posterity Agassiz's former detractors returned to their initial state, hailing him as a master whose wisdom was transcendent and whose genius was singular.

This nature of contemporary opinion, conjoined with Agassiz's blinding public stature that concealed much more than it revealed, meant that he could represent a variety of qualities to divergent personalities in his own times and subsequently. This fact, heightened by the incredibly charismatic quality of his personality, makes Agassiz at once one of the most fascinating and complex men of the nineteenth century. It is a truism to assert that the "real" Agassiz is, of course, to be discovered somewhere in the range of the emotions he inspired. It was the very rare colleague, like Joseph Henry or Theodore Lyman, who was able to achieve this balanced overview. That synthetic insight, in biography, comprises the evaluation of immutable patterns of individual character as these impinge on a social setting in a state of transformation; this dynamic matrix in turn diminishes or intensifies aspects of personality so that it is vital to engage in the essentially artificial effort of halting the sweep of

time and circumstance and asserting this is what Agassiz was, in the main, at a certain juncture in his life. And that judgment, balanced as it might be, should not conceal the fact that at different times of life or at the same time Agassiz was exactly what a disgruntled student thought he was or accorded perfectly with the image held of him by a worshipful philanthropist.

In the subjective effort to sweep away the fetters of mythology that surround a distinctive individual, and conscious that a collective image of this sort is the legacy of past to present so that the dead are never artifacts, it was vital to appreciate both contemporary and historiographic evaluations but to resist employing these as a basis for judgment. If Agassiz was "wrong" on the evolution question but in tune with his culture in the urge for popular education, did these facets of life make him in any degree more or less significant? His will to power and dominance, disturbing to contemporaries and later analysts alike, needed to be seen in the light of his complex motives and ambitions. I came to understand that Agassiz's egoism was essentially a pose that masked a fundamental humaneness and was an ingredient of an absolute dedication to the advancement of science and culture. This was such an overriding ambition that Agassiz felt no guilt or contradiction between private values and public purposes. Appreciation of this quality does much to resolve the contradiction between the scientific dogmatist and the public hero.

We tend to equate intellectual "contribution" with the validity or utility of the ideas held by an individual, and, to the extent that a man popularizes knowledge he is less an intellectual on an ideal scale. Agassiz was an individual who was, by nature, deeply involved and committed to the passions of the moment, and this set of attitudes comprised a public dedication of high magnitude. At the same time, such a stance led Agassiz to oppose evolution and build a great museum, and each act was an inextricable part of this fulsome sense of life that had no meaning unless lived wholly. My sense of admiration for Agassiz's public achievements was derived in part from the urge to dispel the false distinction between the solitary man of the mind—the true "intellectual"—and the organizer or popularizer of knowledge. While it is a mistake to iden-

tify Agassiz solely with this latter condition, there is no doubt it typified his American career. And that career comprised a rectitude and degree of “contribution” as equally creative as the lives of men engaged in the solitary pursuit of truth. The dichotomy I point up is a false one for many reasons, not the least of which is that there is value both in the men who build institutions and those who work in them. In this context, however, its artificiality lays bare a contemporary condition of intellectual life, providing insight into the relevance of Agassiz’s career for modernity.

Intellectuals attempting to achieve distinction and recognition in a world more and more dominated by institutionalism tend to view with hostility personalities like Agassiz who seem to signify the cultural processes they despise. Agassiz was able to resolve the conflict between individualism and institutionalism in a manner personally satisfying and culturally beneficial; in this sense his story is a modern tale, because it prefigures the careers of types of personality whose original intellectual eminence gives them stature and power to shape institutional change. This life history represents, similarly the kind of alliance between men of the mind and men of economic and political power currently so familiar to us. If we do not approve, rather than vent frustration in clichés that separate “scholar” from “organizer” in pejorative fashion in history as in the present, there is patently some fundamental set of qualities in national culture that requires critical examination. In that vein, I suspect that the significance of organizational creativity as exemplified by Agassiz is a plea and an emphasis of less significance at present than when I wrote his biography, perhaps because I am the more conscious of the penalties and tolls such involvement exacts in the entropy-like diminution of individual creativity, having studied the careers of other individuals similarly involved in cultural decision-making. In Agassiz’s case, it should be noted that these were deep exactions, nor was he unconscious of them toward the close of his life. It is not sufficient to demur that Agassiz’s personality and motivations made such individual disfigurement inevitable; we need to know much more about the pressures of culture on personality before such an evaluation is possible. And it is more to the point that self-fulfillment, when

pursued in the Agassiz manner, is far less personally enviable or fundamentally rewarding for the public man than for his "solitary" counterpart.

These are some fundamental reasons why my interpretation of Agassiz is one that admires his incredible energy and dedication to public life, emphasizes his personal warmth and emotional involvement in intellectual activity, and at the same time reveals a mingled sense of sadness that talent was often consumed in the dispersal of energy into realms incapable of individual domination or expressed in ways representing unnecessary efforts for a man already great. I should like to think this view presents a picture sufficiently compassionate that the reader is able to view Agassiz with understanding the more for knowing the energies, enthusiasms, and emotions that inspired and were inspired by this student of nature.

PREFACE

LOUIS AGASSIZ was a student of nature. This biography seeks to report the conditions and passions of that existence.

To Agassiz, the meaning of the creative process was spiritual, and understanding came to him through emotional involvement in intellectual effort. The study of nature was for Agassiz the study of the universe, and so he thought of himself as mirroring the grandeur of natural history through his perceptions. The inner strength that came from this conception enabled Agassiz to think of himself as a unique and singular individual.

Agassiz was perpetually youthful in outlook because he was always optimistic, always looking toward the future. His romantic soul was forever thrilled by the potentialities of a new venture. People were rarely neutral in their reactions to this vibrant, dedicated man. A giant of the nineteenth century, he strode through the world determined to succeed. Success came to Agassiz because he was a person deeply involved in his surroundings, a man who understood the possibilities of life with an uncommon awareness, who knew the uses of power and the techniques by which society could be shaped to provide for the wants of his intellect and the sustenance of his romance with nature.

A man of science, Agassiz was no less a man of the world. He mastered the social environment of Europe and then demonstrated an even greater ability to dominate the culture of the United

States, his second and permanent home. This talent, enriched by the captivating, almost magical charm by which he influenced men of position and ordinary folk, meant that he always received social support for his ambitions. Kings and commoners alike were somehow uplifted from participating in the realization of an Agassiz dream.

Agassiz was a person of contrasts; he loved nature and man in general, but he was determined to let no one stand in the way of his ambition. Ambition for him was always a selfless aim; personal welfare and the progress of science were one and the same. He exemplified a belief that the life of the mind was a noble impulse in and for itself, yet he always acted to demonstrate that knowledge, to be culturally valuable, had to be shared with others. In America, the culture of democracy responded with high enthusiasm to Agassiz, whose public ambitions seemed perfectly in tune with his times and who only wanted to share the excitement that was his when he reconstructed a fossil fish, scaled a mountain peak, discovered signs of ancient glaciers, or collected turtle eggs.

Standing between two diverging intellectual climates—the idealism of an older world view and the empiricism of modern times—Agassiz's mind reflected the larger philosophical contrasts of his age. Possessed by universal compulsions, he taught men to appreciate specialized knowledge and impressed society with the need to support science and advance the professional status of its practitioners. In approaching nature with a complete identity of mind and spirit, his subjective assessment of creation was in sharp contrast to the objectivity of a developing modern attitude, but he had done much to inspire that attitude by his lasting contributions to ichthyology, paleontology, and geology. In an important sense, Agassiz helped create cultural conditions that made his cosmic world view less and less meaningful with the passing of time.

Surrounded by multitudes of admirers, Agassiz was nevertheless a man who lived in personal loneliness and in growing intellectual isolation. These were the penalties resulting from years of authority and from the urge to domineer society and science. Yet he never knew failure, and he left the world richer for his presence.

The writing of this book was facilitated by many people and institutions. It is a distinct pleasure to acknowledge the deep indebtedness I feel for such aid. The volume began as a doctoral dissertation dealing with Agassiz's American career, written at Northwestern University. Professor Ray Allen Billington directed this study, providing unfailing encouragement at every stage of writing and research. Initial research was made easier and my understanding of American science increased, by the award of an Advanced Graduate Fellowship from the American Council of Learned Societies. While working under this grant I benefited from the advice and kindness of Professors I. Bernard Cohen and Richard H. Shryock. Subsequent research was made possible in part by a grant-in-aid from the Horace H. Rackham Faculty Research Fund of the University of Michigan, and a Faculty Research Fellowship from the Graduate School of Wayne State University.

I should like to thank Harvard University for permission to consult and use manuscripts on deposit at the Houghton Library, the University Archives, the Gray Herbarium, and the Museum of Comparative Zoology. My work in Cambridge was made rewarding by the kindness of many people. I am particularly grateful for the assistance of Professor William A. Jackson and Miss Carolyn Jakeman of the Houghton Library, Mr. Kimball C. Elkins of the University Archives, and the staff of the Gray Herbarium. I am indebted to Professor A. Hunter Dupree, who shared with me his extensive knowledge of manuscripts relating to Gray and who made copies of letters available to me. My manuscript was completed before I could benefit from his recently published biography of Gray. I owe a special debt of gratitude to the staff of the Museum of Comparative Zoology at Harvard College. Without the interest, advice, and unfailing assistance of people who work in the spirit of Agassiz and in the building he began, this book could not have been written. Of these, I am appreciative of the help of Miss Jessie B. MacKenzie, librarian, and for the many kindnesses of Miss Ruth C. Norton. Dr. Tilly Edinger of the museum was of direct assistance in research, and was a welcome auditor, hearing my opinions on Agassiz and his work with understanding and sympathy. Professor Alfred S. Romer, who as director of the Museum of

Comparative Zoology is Agassiz's modern successor, enhanced my understanding of Agassiz as a man and a naturalist. His advice and assistance were invaluable. The illustrations in the volume are all reproduced through the courtesy of the museum, unless otherwise acknowledged.

I also wish to acknowledge the kind co-operation of the staffs of the following archives and institutions: the American Philosophical Society, the Academy of Natural Sciences of Philadelphia, the Historical Society of Pennsylvania, the Library Company of Philadelphia, the Manuscripts Division of the Library of Congress, the Smithsonian Institution Archives, the United States National Archives and Records Service, the Yale University Library, the Collection of Regional History and the University Archives of Cornell University, and the New York State Museum at Albany. I am also grateful to the following people who helped in special ways: George W. White, Claude W. Hibbard, Ernst Mayr, William J. Clench, James H. Zumberge, Albert Hazen Wright, Donald F. Zinn, Nathan Reingold, Karl Guthe, Francis C. Haber, and W. B. McDaniel, II. Mrs. Louise Hall Tharp was very kind in giving me information on Elizabeth Cary Agassiz and providing me with copies of manuscript material.

My greatest intellectual obligation is to Professor Bert James Loewenberg of Sarah Lawrence College. He first stimulated my interest in Agassiz and American science and culture, advised me in the revision of the manuscript, and was a source of constant support. This book reflects his friendship and also, I hope, his teaching. My wife, Dr. Nancy Oestreich Lurie, was a hard taskmaster and a wonderful critic who took valuable time from her own scholarly labors to help me in mine. This book is the product of her encouragement, and I hope she likes it.

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