Finding Order in Nature: the Naturalist Tradition from Linnaeus to E. O. Wilson by P. L. Farber

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BOOK REVIEW


One of the attractions of this relatively short book is its summary of the history of an old tradition in biology: natural history. Professional biologists as well as undergraduate students seeking an overview of the topic would be rewarded by reading this synopsis. The book divides natural history studies into 9 chronological but overlapping sections, beginning with Linnaeus and ending with E.O. Wilson.

But Dr. Farber traces the naturalist tradition somewhat further than his book's title implies. He mentions, in the context of Linnaeus and Buffon, the works of Aristotle and Pliny, without dwelling on their detailed philosophies and treatments. He does, however, give a contextual social framework to the works of Linnaeus and Buffon and a number of influential natural historians up to the present. This contextual summary is the strongest attribute of the book. It was enlightening to me to understand the lavish natural "cabinet" tradition of the well-heeled of the 18th century and its evolution into the natural history museums we have today. He also explored adequately the dual nature of these museums as research institutions and as sources of public entertainment and education. In another discussion of dual motivations for natural history studies, he notes the differing world views of Linnaeus, seeking (in part) to uncover the hand of God in His creations, and Buffon, who followed a more secular path, a dichotomy continuing among serious natural historians today.

Natural history was expanded to a worldwide scope during, but more intensively after, Linnaeus' time. Several European countries during this period of colonial expansion were seeking riches, including those derived from living things, from far-flung locations. As amazing finds arrived in Europe, they required altered views of the immensity of biological diversity. Catalogs, as well as theoretical summaries of the origin of this diversity, began to appear. "Biology" emerged as a definable science and immediately splintered into experimental and descriptive branches. A further splintering into disciplines followed as natural historians specialized in response to discoveries of incredible diversity of form and function during this worldwide growth.

Dr. Farber thus set the stage for Darwin and colleagues to propose a synthetic theory of evolution based on natural selection. The paradigm shift was largely accepted by natural historians, with notable exceptions, including many proponents of biology's more experimental branches such as physiology and its more technological branch, medicine.

A new synthesis of evolution, experimentation, and natural history began in the early 1900s with an increased understanding of the mechanics of genetics and population. As Farber clearly writes, this new synthesis was championed by the likes of Julian Huxley, Theodosius Dobzhansky, and Ernst Mayr. The earlier splits of the fields of anatomy, physiology, ecology, and medical technology continued on their separate paths, but these syntheses sought more commonalities than distinctions between the disciplines in understanding life's diversity and its human relevance. I was somewhat surprised that the author passed over Willi Hennig and the impacts of his methodologies for phylogenetic systematics on natural history. I was equally surprised that the impacts of Francis Watson and James Crick and all of molecular biology were ignored as well. I understand and appreciate that this book is a brief summary of natural history. I further recognize that much (or many) should be passed over, despite widespread influence. This omission does not detract fatally,
however, from the wonderful succinctness that typifies this book.

Farber closes by noting that natural historians have often become the generalists of the scientific world. Sometimes in their attempts to synthesize the findings of diverse branches of endeavor, such as those of Wilson with sociology and biology, they can alienate both. But more often the dialogue results in mutually beneficial findings.

Farber, and I, end with his closing statement summarizing what has been and must be done, and why we might consider it worthwhile:

Naturalists have a vast catalog to complete and a broad tableau to envision: one that includes and has considerable relevance for that uniquely reflective species, *Homo sapiens*.

Check your motives and read the book.

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