

Book Reviews

a programme for action, it may sanction an interest in accounting for the natural order in some particular way. Such a strident claim as that of the Old School to a monopoly in the only method of acquiring all truth should certainly raise suspicions about what they were defending. Bozeman little more than hints at the opulent landed following of this variety of Calvinism. It would also be interesting to know about transatlantic exchanges in this period. The Scottish Church had, after all, rejected the "Moderates" who were the intellectual fathers of the old School. Yet the replacement was a General Assembly much more sympathetic to fundamentalism. The study of the relations of science and religion is becoming a familiar area in English history. Bozeman's work is an important delineation of the context from which scientific naturalism emerged in America.

RICHARD W. BURKHARDT jr., *The spirit of system: Lamarck and evolutionary biology*, Cambridge, Mass., and London, Harvard University Press, 1977, 8vo, pp. [xii], 285, illus., £11.55.

Although Lamarck's is a familiar name, too often he is remembered simply as a forerunner of Darwin, or associated narrowly with a doctrine (the inheritance of acquired characteristics) which he never claimed to have originated. But Lamarck's voluminous writings are concerned with all aspects of nature from cosmology to psychology. It is to Burkhardt's credit that his monograph, while primarily addressing itself to Lamarck's evolutionary biology, never underestimates the breadth of Lamarck's philosophy of nature. Burkhardt patiently examines the development of his subject's thought against the background of eighteenth-century science, identifying those features which became integrated in Lamarck's systematic accounts of transformism, most notably in his *Philosophie zoologie* (1809). As Burkhardt shows, Lamarck was faced in the 1790s with the problematical relationship between fossil and living species of animals. He was unable to conceive a mechanism whereby species became extinct; rather it seemed to him that living species changed over time, as varying conditions and differing needs created in the species new habits and even, on occasion, new organs. Much of Lamarck's work was speculative and it failed to satisfy many of his contemporaries who preferred George Cuvier's rigorous and dogmatic pronouncements on the naturalist's proper methods.

Burkhardt's study is based principally on published writings; indeed, it is a measure of Lamarck's relative isolation, even in his own time, that so little manuscript material survives. Our knowledge of Lamarck's private life and personality is scanty, and his published work generally yields few clues as to what he was reading or discussing with colleagues and friends. But these are limitations of the historical record with which any historian has to contend. Burkhardt's achievement is to construct a full, sympathetic portrait of this most fertile of French naturalists.

SIR J. WILLIAM DAWSON, *Modern ideas of evolution*, New York, Science History Publications, 1977, 8vo, pp. xxv, 240 [facsimile], \$4.95 (paperback).

This useful reprint of Sir William Dawson's celebrated anti-Darwinian book (originally published in 1890) is edited by William R. Shea and John F. Cornell, and Shea contributes a critical introduction. Dawson (1820-1899) was an eminent