

Thomas Potthast, *Die Evolution und der Naturschutz. Zum Verhältnis von Evolutionsbiologie, Ökologie und Naturethik* (Frankfurt and New York: Campus Verlag, 1999), 307 pp., \$31.00/DM68,00 (paper).

This book is a solid contribution to the current historical, philosophical, and ethical debate on the relation between evolutionary biology and nature protection. Potthast explores this topic in a thorough way, leaving the reader sometimes perplexed by its complexity and engaged by its conclusions.

Potthast discusses evolutionary biology, ecology, conservation, and the ethics of nature from several different perspectives, organized in four parts. The first part explains the integration of evolutionary theory and ecology and its relevance for conservation. The second part lays out the history of evolutionary theory, especially with respect to the emerging ethical emphasis on biological diversity. In the third section he brings this discussion to recent problems concerning genetic engineering and nature conservation. The final part of the book brings together the previous topics with Potthast's own original contribution to the relation between evolutionary theory and environmental ethics.

There is no necessary or immediate connection between evolutionary theory and protection of nature. One may for example see all activities, including destruction of nature, as part of one grand evolutionary process. This is not the view of Potthast, who uses a great part of the book to argue that reflections on evolution and environmental concerns go hand in hand both philosophically and historically. Knowledge of evolutionary principles has in the past provided environmentalists with arguments for nature protection, Potthast argues, and this trend should also continue in environmental ethics of the future. It is especially the rich history of ecological ideas that provides Potthast with ammunition for his thesis. He discusses the ecophilosophical implications of ecologists such as Eugenius Warming, Arthur Tansley, Warder Allee, Charles Elton, Evelyn Hutchinson, Robert MacArthur, Eugene and Howard Odum, and many others to make his case.

Potthast argues that evolution functions as a frame of reference for new dynamic perspectives both in ecology and conservation. Yet, he remains skeptical about a successful integration between theories of ecosystem ecology and evolution due to contradictory assumptions on basic units and mechanisms. He finally opposes the idea of a general opposition between "good" natural evolution and "bad" human alterations of processes.

The author points out that evolutionary arguments used in environmental debates, such as biodiversity, have their origin both in conceptual shifts within biological sciences and ecology and in politics. The evolutionary vocabulary does open up social, political, ethical, and ultimately metaphysical ques-

tions and views, which enrich – and sometimes blur – the environmental discourse. The threat of losing genetic variety on a global scale serves as one of Potthast's chief examples of how a biological phenomena transcends the realm of science to emerge as a social, political, and ethical issue. Evolutionary theory and science may in the end provide a worldview that includes all essential aspects of human life. The combination of scientific and metaphysical reasoning may also be found in concrete moral dilemmas such as judging the “naturalness” of genetic engineering.

Readers of this journal looking for a thick historical account of how evolutionary theory became entangled with protection of nature may find this book unconvincing. Instead the aim of the book is to sort out the theoretical and ethical connection between evolutionary theory and protection of nature. Potthast has done an excellent job of untangling all the various understandings and definitions of evolutionary terminology in ecology and biology in relation to environmental ethics and conservation.

Peder Anker

Thomas Junker and Eve-Marie Engels, eds., *Die Entstehung der Synthetischen Theorie. Beiträge zur Geschichte der Evolutionsbiologie in Deutschland 1930-1950*, Verhandlungen zur Geschichte und Theorie der Biologie, no. 2 (Berlin: VWB-Verlag für Wissenschaft und Bildung, 1999), 380 pp., DM48,00 (paper).

These workshop proceedings are titled “The origin of the synthetic theory: contributions to the history of evolutionary biology in Germany, 1930–1950.” With one exception, the contributions are in German, and there are English summaries in the back.

For a multi-authored work, the volume follows an unusually consistent line: German evolutionists stayed in step with foreign colleagues throughout the 1930s and 1940s, as the modern evolutionary synthesis developed. Inspired by Theodosius Dobzhansky's *Genetics and the Origin of Species* (1937) and with further input on genetics from Nikolai Timofeev-Resovsky in Berlin, German evolutionists produced three landmark works: an essay collection edited by Gerhard Heberer (1943), and books by Bernhard Rensch (1947), and Walter Zimmermann (1948). The results, it is argued, were essentially the same as in the U.S., U.K., and U.S.S.R.: rejection of Lamarckism and saltationism, reconciliation of genetics with natural selection, and synthesis of reductionist population genetics with naturalists' explanations of diversity, speciation, and macroevolution.