



CHICAGO JOURNALS



The University of Chicago

---

Foreword: Evolution in the Century of Biology

Author(s): Thomas R. Meagher and Douglas J. Futuyma

Source: *The American Naturalist*, Vol. 158, No. S4, EXECUTIVE DOCUMENT: EVOLUTION, SCIENCE, AND SOCIETY Foreword: Evolution in the Century of Biology by Thomas R. Meagher and Douglas J. Futuyma (October 2001), p. Si

Published by: [The University of Chicago Press](#) for [The American Society of Naturalists](#)

Stable URL: <http://www.jstor.org/stable/10.1086/323109>

Accessed: 12/08/2014 09:41

---

Your use of the JSTOR archive indicates your acceptance of the Terms & Conditions of Use, available at <http://www.jstor.org/page/info/about/policies/terms.jsp>

JSTOR is a not-for-profit service that helps scholars, researchers, and students discover, use, and build upon a wide range of content in a trusted digital archive. We use information technology and tools to increase productivity and facilitate new forms of scholarship. For more information about JSTOR, please contact support@jstor.org.



*The University of Chicago Press, The American Society of Naturalists, The University of Chicago* are collaborating with JSTOR to digitize, preserve and extend access to *The American Naturalist*.

<http://www.jstor.org>

## Foreword: Evolution in the Century of Biology

Biological sciences have changed phenomenally over the past 30 years. The relationship between biological sciences and society has also undergone considerable change. Thus, it is critical that practitioners in any particular area of biology devote effort to understanding not only their discipline but also its broader significance and implications. Fittingly enough, one area that is currently undergoing rapid change is the study of evolution.

Evolution holds the peculiar distinction of being recognized as a cross-cutting theme that touches on almost all aspects of biology while at the same time being considered controversial by a large percentage of the public. Indeed, public perceptions of evolution are often characterized by caricatures rather than concrete science per se. Such varied perceptions are often exploited by special interest groups to mount attacks on the teaching of evolution, as seen in the dramatic and highly publicized sequence of events in Kansas over the past two years. Similar events are unfolding in other states as well, such as the recent House Concurrent Resolution No. 74 put forward by the Education Committee of the Louisiana House of Representatives, stating that the Darwinian theory of evolution is inherently racist, with the "conclusion" that it is inappropriate for school curricula. Access to documents that make evolutionary biology accessible to educators and government officials is not a complete defence against such attacks, but it is an important step. Creating a document that summarizes the accomplishments, current state of knowledge, and future potential of evolutionary biology was the goal of the working group in "Evolution, Science, and Society" (hereafter ESS).

This working group has a long history and a strong association with the American Society of Naturalists (ASN). The initial perception of need for such a working group was made by J. H. Brown (ASN President, 1991) and subsequently acted upon by D. J. Futuyma (ASN President, 1994) and L. Real (ASN Vice President, 1991) in the form of a workshop sponsored by Indiana University in 1994, drawing together delegates from a range of scientific societies, including, alphabetically, the ASN, the Animal Behavior Society, the Ecological Society of America, the Genetics Society of American, the Paleontology Society, the Society for Molecular Biology and Evolution, the Society for the Study of Evolution, and the Society of Systematic Biologists. At that meeting, D. J. Futuyma and T. R. Meagher were nominated and elected as cochairs of a group mandated to produce the substantive Executive Document here reproduced in *The American Naturalist* as

well as a shorter Executive Summary that appeared in *BioScience* in November 1999. The eventual working group was constructed to represent a broad range of evolutionary research, as well as educational and historical dimensions.

With funding from the A. P. Sloan Foundation and the National Science Foundation (NSF), a series of workshops were mounted, facilitating the structured discussions that ultimately led to the content of the documents produced. The working group also drew on a broader range of expertise for specific components. The total involvement in producing the ESS documents was deliberately far-reaching.

Why is this document appearing in *The American Naturalist*? The Executive Board of the ASN felt that it should be available to the scientific community in a readily accessible venue. Moreover, its publication in the journal provides a source for citation in the scientific literature.

How can this document be used by the readership of *The American Naturalist*? As evolutionary biologists, we should take to heart the lesson of the Red Queen. The social climate and scientific context of evolutionary biology is constantly changing, and the long-term health of our field depends on our keeping pace with such change. The ESS document does more than simply summarize contemporary evolutionary biology; it also arms the reader with enhanced awareness of the breadth of advances and potential for future development of the field. Just as the document has been used to frame scientific initiatives at the NSF and other federal agencies, so it can be employed as a useful source of information for addressing university or college administrations when identifying promising areas for future faculty appointments. More generally, given the state of flux in biology, this document has the potential to contribute substance for the many discussions on potential reorganizations of biology taking place now within many universities and colleges. Indeed, it has already done so in a number of cases. This document has served and will continue to serve as a resource for communicators and educators. Finally, this document is a potentially useful resource for students going into evolutionary biology or the many disciplines touched by evolutionary biology, to help them orient their own scientific paths within the broader context of twenty-first century biology.

Thomas R. Meagher University of St. Andrews  
Douglas J. Futuyma State University of New York,  
Stony Brook

