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## BOOK REVIEW

HAILMAN J.P. & STRIER K.B.: PLANNING, PROPOSING, AND PRESENTING SCIENCE EFFECTIVELY. Cambridge University Press, Cambridge, New York, Melbourne, 1997, 182 pp. ISBN 0-521-56023-3, price USD 49.95 (hardback). ISBN 0-521-56875-7, price USD 14.95 (paperback).

Although many books with a similar aim have been published (the authors give a list of 39 such volumes, and four relevant articles) this guide is an important addition. It has the advantage of helping scientists in a more general way than other books. While most of them are "Style Manuals", such as – "The Chicago Manual of Style", published in 1993 and now in its 14th edition, others specialize in the presentation of visual data or research methods, or lecturing. This guide is very concise, nevertheless, it offers biologists help with, as the chapter titles indicate: "How to…: Plan Research, Write a Research Proposal, Write a Research Report, Present Research, Write a Curriculum Vitae".

In many countries University education in biology lacks, or almost lacks courses on theory of scientific research and scientific writing. Graduate students depend mostly on their thesis advisor, with the inevitable risk of subjective guidance. Because of this I particularly recommend the introductory chapters: A. Scientific Epistemology and B. Planning Research. The authors disentagle what is usually included under "scientific method": (A) accumulation of knowledge and understanding, from (B) specific research activities of the individual investigator. The subtitles of the first subchapter are: Science as process and product; Deduction and prediction; Observation and data; Comparison and decision; Induction and model; Uniqueness of models; Some consequences of the uniqueness; Models: hypothesis, theory, law; Roles of the individual investigator; Is natural history really science?

We may still read manuscripts or even published papers in which it is claimed that a hypothesis or model was **proven**. Thus it is useful that among all the principal *caveats* considered, there is: "no model can ever be proven true", and other similar "rules of thumb". The reader need not, of course, agree with all the rules. I do not subscribe to the warning that the discussion should never be the longest section of a report. This may, and even should be the case, when the results are given in figures and/or tables and the accompanying text is short.

The book will become, particularly for young biologists, a valuable guide in the early years of their scientific careers.

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