

## **Eduard Brückner - The Sources and Consequences of Climate Change and Climate Variability in Historical Times**

Nico Stehr and Hans von Storch (Eds.), Kluwer Academic Publishers, Dordrecht, x + 338 pp., ISBN 0-7923-6128-8, 2000, \$167.00

Published in *Eos, Transaction, American Geophysical Union*, Vol. 82 (2001), p. 104

Concerns about irreversible and unfavorable climate change are not new, nor are discussions about its possible causes and consequences. Since the late 18th century, when science-based knowledge began to replace the mystic and religious views about climate change that had prevailed for centuries, there have been more or less permanent debates on climate change and climate variability. The discourse was not only carried out among experts but repeatedly – in varying contexts – in the public as well. By the end of the 19th century, the debates about climate change culminated in a vivid discussion of the causes of the ice ages, the nature of historical climate variability, the possible human influence on future climate, and the impact on the evolving economies and societies. These issues were discussed by prominent scientists including Svante Arrhenius, Eduard Brückner, and Julius Hann. Moreover, these topics became politically relevant. As an example, a number of scientists speculated that extensive deforestation, or also reforestation, might potentially cause a large-scale anthropogenic climate change.

Sociologist Nico Stehr and climatologist Hans von Storch are specialists in the early climate change debate. They have highlighted the similarities between the past and the current discussion many times, and recently their statements have initiated a new debate [von Storch and Stehr, 2000]. They posit that Eduard Brückner (1862-1927), a climatologist and geographer, was a leading figure in the early debate. Today, Brückner is known only to a few German-speaking geographers and geologists through his main works “Climate Change since 1700” (1890) and “The Alps during the Ice Ages” (1909), the latter of which was first-authored by Albrecht Penck. Stehr and von Storch now re-introduce Brückner's almost forgotten work on climate change and climate variability to a wider, non-German-speaking audience by editing a book with translations of some selected works.

The book starts with an introductory chapter by Stehr and von Storch that provides an interpretation of the significance of Brückner's work and a short biography. The main part of the book (287 pp.) contains eleven of Brückner's writings, ten of which were translated from German by Gordon Gamlin and Barbara Stehr (the eleventh is a reprint of an English article). Different kinds of works were chosen (book chapters,

journal articles, conference talks, and a newspaper article) to reflect Brückner's broad field of activity. The different writings, originally published between 1888 and 1915, are arranged chronologically, and the book concludes with a bibliography of Brückner's work, a subject index, and a name index.

The editors' intention is to transmit Eduard Brückner's ideas to a present-day scientific public and in the present-day scientific context. They are motivated by the opinion that contemporary discussions lack the influx of past ideas. The introduction is a nice paper that is not so much about the relevance of scientific findings as one might deduce from the previous statement. In fact, it highlights the way of thinking apparent in Brückner's work and his efforts to communicate his ideas to the public. It gives a flavor of the lively debate at that time. The authors discuss Eduard Brückner's and Julius Hann's different views of climate variability and their respective roles in the debate, and draw a comparison to the present-day situation.

The main part of the book, consisting solely of translated text and some re-drawn figures, will be most appreciated by those interested in historical aspects of the climate debate. The reader who makes this effort, however, will find many remarkable, apt, and astonishingly modern thoughts of this excellent scientist. The thorough literature review in "Climate change since 1700" and the way in which Brückner harshly criticizes the numerous popular but unscientific weather forecasters ("Weather Prophets", 1902) are a lucid expression of Brückner's modern spirit.

For those who would like to delve deeper into the subject, this edition may not be fully satisfactory. There are instances in which the interested reader might wish for a little more information, such as the first name of a person mentioned. In addition, a more detailed and better-supplemented reference style would have facilitated locating some of the cited work. The only major weakness of the book is that it is too expensive.

A review of this book would not be complete without leaving the last word to Eduard Brückner himself. The following, slightly adapted statement is taken from "Climate change since 1700": "There are numerous hypotheses and theories about climate change. Quite naturally they have caught the public attention, as any proof of past climatic change points to the possibility of future climate change, which inevitably will have significant implications for global economics".

### **Reviewer**

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### **Reference**

von Storch, H. and N. Stehr, Climate change in perspective, *Nature*, 405, 615, 2000.