
BOOK REVIEW

TITLE: *Thor's Legions: Weather Support To The U.S. Air Force and Army: 1937-1987*

AUTHOR: John F. Fuller

PUBLISHER: The American Meteorological Society
45 Beacon Street
Boston, MA 02108

COPYRIGHT: 1990, ISBN: 0-933876-88-2
457 pp. \$60 list, \$40 AMS Members

TITLE: *Some Meteorological Aspects of The D-Day Invasion of Europe: June 6, 1944*

EDITORS: Roger H. Shaw and William Innes

PUBLISHER: The American Meteorological Society

PREPRINT: 1986, 170 pp. \$20 list, \$15 AMS Members

Both books are excellent historical references and a must for any meteorologist interested in understanding how the profession of meteorology has evolved. I would rate *Thor's Legion's* the better of the two books because of the manner in which it was published. Editorial reviews, type-setting, and professional printing make for a more attractive, more cohesive and easier-to-read book than a post-print volume. The *D-Day Invasion of Europe* was more operationally focused.

Thor's Legions

John Fuller undertook painstaking efforts as he delved into documents and reference materials spanning more than 100 years. Many people faced with the same task would have never attempted what he did. Although his efforts were partially masked by editorial objectives (which he acknowledges early in the book), he succeeded in tracking the political, economic, and human side of weather support to the Air Force and Army over half a century. He prefaced this history with solid background documenting the roots of the military weather service in the late 1800's.

The learning curve played heavily throughout the book. Fuller made frequent references to the fact that lessons learned were often (but not always) used to prevent future problems. The value of training, coordinated sharing of data, and applied research and development activities paid off as Air Force meteorologists contributed to the success of operations in two world wars, and other operations (including Space Shuttle launches). It seems that this was partially overlooked by the Germans following their initial successes in World War II and by the United States during the Iranian hostage rescue attempt. Although it occurred after this book was written, weather support was apparently given a high priority during the Middle East war in 1991.

Fuller's approach was that of family. As a relatively small group, military weather people and their families became a close-knit group through their careers and constant relocations. This comradeship made the Air Weather Service a stronger organization because its players knew what they had to do to succeed professionally and what hardships they had to endure personally. In providing testimony to the advances made by women and blacks, and to people who have touched me during my career, Fuller spins a human tale. It would be exciting to see similar volumes addressing the history of the National Weather Service and the Navy Weather and Oceanographic Services. The lack of reference

to the Navy was a serious oversight in the DoD weather history.

On a more somber note, following the publication of this book, the Air Force decided to disband the Air Weather Service. Fuller was obviously concerned about this when he wrote his book. The demise of the Air Weather Service effectively destroyed the cohesiveness of a highly effective military weather organization.

Due to its perspective, the book was heavily weighted in political and bureaucratic details; this made it somewhat difficult to read in many places. There were relatively few maps; those that were shown focused on military operations. It would have been useful to include copies of early weather charts, charts from the D-Day invasion of Europe, and others relating to weather.

The acronyms listing was helpful, but could easily have been ten times longer because of the plethora of military jargon. The weight of references to scores of reports, memoranda, and other documents required judicious selection of sections to read.

In summary, I'd rate the book a "gem" as a reference book, especially for weather historians. It's okay as a reader, but keep a pillow handy.

D-Day Invasion of Europe

This volume was a compilation of papers presented at a special Symposium in 1984 sponsored by four local chapters of the American Meteorological Society in California. The National AMS helped by publishing the post-print volume. The chapters, the National AMS, and the presenters should be commended for their efforts in celebrating and documenting the bi-centennial of this important event.

As with any volume of this type, papers are unedited, often disjointed, and may contain poor quality figures. This post-print is no exception. Many of the papers contained redundant information and some were very hard to read due to the writing style of the individual authors. Maps and charts were poor quality and this seriously detracted from the effectiveness of the volume. However, the AMS noted this deficiency on the cover page and their rationale (cost and historical value) was valid.

Because the focus of the volume was on a specific event, rather than a long-term historical record, meteorology and oceanography were given their full due. Presentations addressed forecasting techniques, data limitations, and impacts of forecasts on military operations. The section on oceanography issues was especially enlightening. Forecast and observed surface and upper air maps (prepared by both Allied and German Weather Services) and the report summarizing the decisions actually made leading up to the D-Day invasion provide an outstanding historical framework.

The complex set of forecasting requirements surrounding the coordinated air, land, and water assault on D-Day, coupled with political forces, created a forecasting nightmare. In hindsight, it's a testimony to the skill and good fortune of the forecasters involved. We could all be speaking German if they had been wrong! This volume documents what went into those forecasts and what didn't. Forecasting in 1944 was a lot more than numerical and statistical guidance and complex sets of meteorological equations.

The volume is worthy of being added to any meteorologist's collection. It clearly shows the value of weather and oceanography support to military operations. It's a message that we shouldn't quickly forget.

H. Michael Mogil