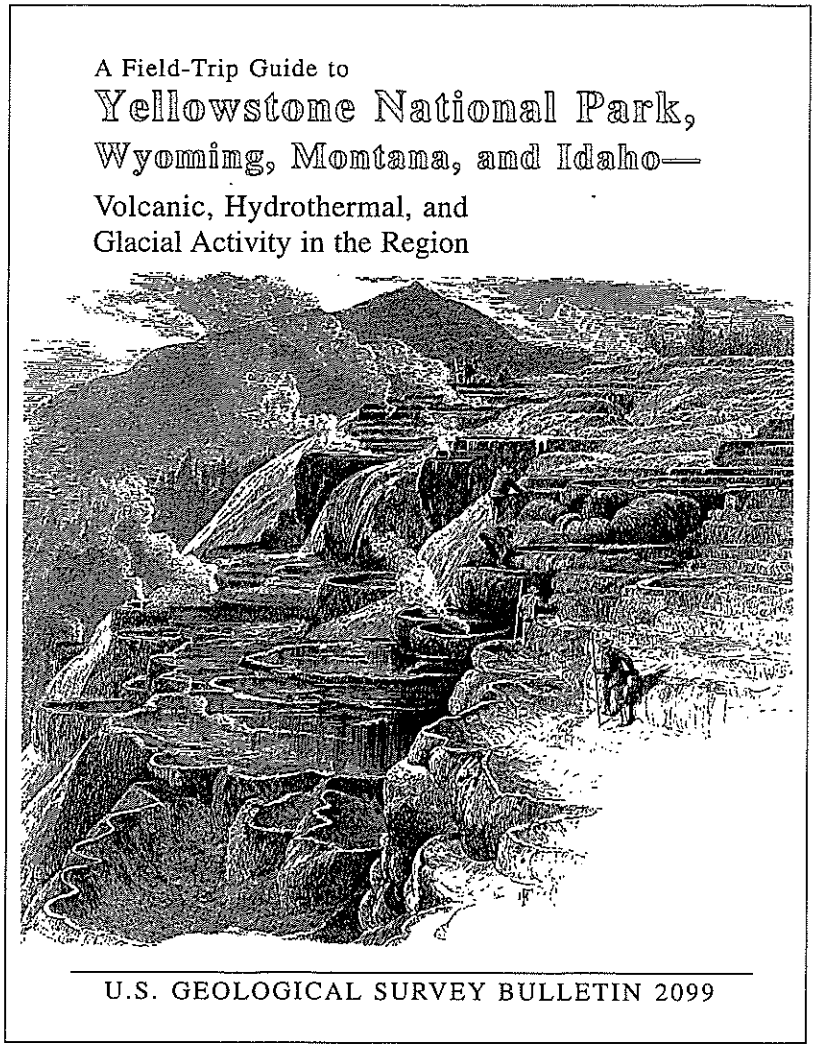
Book Review

Field Trip Guide to Yellowstone National Park, Wyoming, Montana, and Idaho Volcanic, Hydrothermal, and Glacial Activity in the Region. U.S. Geological Survey Bulletin 2099. By Robert O. Fournier, Robert L. Christiansen, Roderick A. Hutchinson, and Ken L. Pierce. Washington, D.C., 1994. 42 pages; $ 6 .00 (paper).



Reviewer's Caveat: The authors are friends and co-workers of mine for whom I have the greatest respect.

This field-trip guide was developed for an international symposium on water-rock interactions, an arcane subject, held in July 1992. Emphasis is accordingly placed upon geochemistry and hydrology of Yellowstone's geyser basins. In spite of this focus, the guide is an excellent companion for the park visitor whose interest in Yellowstone geology extends beyond curiosity regarding the time of Old Faithful's next eruption.

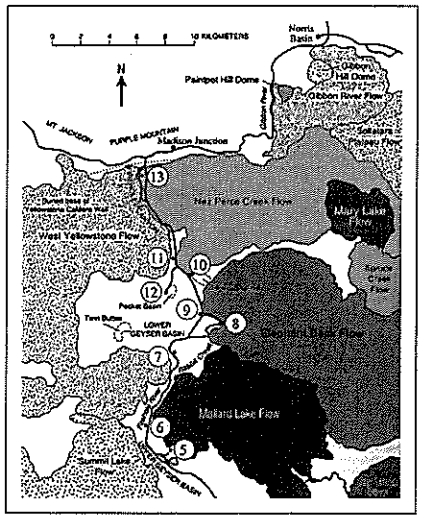
Why? Because the authors are first-rate scientists who have spent many years studying not only hydrothermal features but the volcanic and glacial events that produced the Yellowstone we see today. They describe in relatively simple terms what the interesting geological features of the park are, how they were formed, and how they are related. Color and black-and-white photos plus simple maps and diagrams enhance the reader's understanding of the text.

The guide is arranged as a series of numbered stops beginning in Grand Teton National Park and extending around Yellowstone's Grand Loop. Under each stop a brief statement describes the subjects to be discussed. There follows a detailed description. Also, there are beautifully concise summaries of Yellowstone geology. One can read *Introduction To Yellowstone* (pages 3-5) and have a very clear idea of Yellowstone's evolution and why geysers and hot springs are so numerous. On page 12 is a description of how geysers work that is gin-clear and brief; the best I have read.

This is an easy guide to surf. You can skim the pages to find what you need skipping over what you don't. But be warned: when I tried this approach, my eyes were constantly grabbing onto some detail, and I would plunge into the text where I had no intent of being.

The text contains some unfamiliar words, as you would expect, but the authors have snared most of them in the glossary. But not all. Hydrolysis reactions and enthalpy-chloride reactions evaded their net, and I suspect you will find others.

I wish the guide included a map of northern Jackson Hole. Much of the glacial geology described there is almost unintelligible without such a map.



And I think you will find (as I did) that the scientific convention of citing references ad nauseam intrudes upon the communication between writer and reader in an irritating way.

That said, I don't think you will find such a happy combination of technical and nontechnical writing by such knowledgeable authors in a sensible format anywhere in the bookstores of the Greater Yellowstone Ecosystem. Buy it promptly before it goes out of print, as it certainly will.

John M. Good
Yellowstone National Park