The Landscapes of Southern Alberta

By Chester B. Beatty
University of Lethbridge Production Services,
95 p., 1975,
$3.50 (paperback only)

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"Life would be a pretty dull affair... without some interest in and understanding of the natural world in which we find ourselves." Such is the author's rationale for writing an elementary treatment of the geomorphology of southern Alberta. The book is designed for the layman (which accounts for the fact that it can be seen for sale in several drugstores in Calgary) but geologists and geographers not too acquainted with Alberta would probably learn something from reading it.

Southern Alberta can be divided on both structural and physiographic grounds into mountains, foothills, and plains provinces, and this natural subdivision provides the organization for the book. Introductory chapters are concerned with the traditional battle between tectonic and gravitational forces and with bedrock geology. Various processes and structural features are defined, and rocks, geologic time, and southern Alberta stratigraphy are classified in a simplified fashion. The meat of the book is a chapter-by-chapter treatment of mountains, foothills, and plains. For each province the author first describes the general geomorphic characteristics, including bedrock structure, effects of glaciation, and common landforms. He then discusses particular features which are unique or whose origins are debatable. These include the Frank slide, the Oldman River water-gap, and patterned ground on Plateau Mountain (in the mountains); the Foothills Erratics Train and Porcupine Hills meltwater channels (in the foothills); and aligned coulees, igneous stocks, prairie mounds, and hoodoos (on the plains). Treatment of controversial subjects (e.g., origin of prairie mounds) is generally fair. The author promotes his own theories of coulee alignment and distribution of slumps (control by Chinoow winds in both cases) but concedes nonuniversal acceptance.

The text is augmented by several line diagrams and many black and white photographs, which are adequately reproduced. The author notes that most of the photos were taken from major highways and roads, so that the scenes shown would be ones that people actually see. Another useful feature is a list of references at the back of the book.

As a popular, natural history-type work this book is a success (both my opinion and that of some laymen I know). The writing style is casual, perhaps conversational, with a touch of humour here and there; presentation of ideas is, for the most part, clear. But there is the occasional lapse. The lay reader would be confused by the poorly presented classification scheme for mass movement and would wonder why some terms are used in tables long before they are defined in the text. He would probably be perplexed after reading the explanation of patterned ground (admittedly a very difficult subject to handle). More experienced readers will be surprised to learn that plate tectonics is based on the concept of "moving surficial slabs of rock" and that the earth's crust was created 4500 million years ago. These and a few other examples of misleading statements are unfortunate but perhaps forgivable in a work of this sort, where gross simplification is sometimes necessary.

The book would serve well as a text in Alberta high school science courses and low-level undergraduate geography courses. It is presently used as a textbook for a natural history course at the federal penitentiary at Drumheller, Alberta, and reportedly has been well received by the inmates.

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