

fundamental source for reference.

The consummate skill and artistry of the authors of Denbigh cultures are lavishly demonstrated in the delicately thin and exquisitely flaked bifacial side blades. These are thought to have been set in grooves along the sides of antler or ivory arrowheads, spear points, and harpoon heads.

A detailed discussion of the geology of this site, by David Hopkins, and of the radiocarbon dates, forms an important section of the book.

Quite apart from the culture history of the Eskimos and their antecedents, students who are interested in the manufacture of stone tools will consult this work for many years to come. All persons interested in culture history will be compelled to use this documented sequential study, and of course everyone interested in Eskimos and the north will find it richly rewarding.

W. S. LAUGHLIN*

*Fellow, Center for Advanced Study in the Behavioral Sciences, Stanford, California.

LINEAMENT ANALYSIS ON AERIAL PHOTOGRAPHS: exemplified in the North Sturgeon Lake area, Alberta. By PETER J. HAMAN. *Calgary: West Canadian Research Publications. Series 2, Number 1. 1961. 12 x 8½ inches, 23 pages, 14 figures. \$2.50.*

GEOMECHANICS APPLIED TO FRACTURE ANALYSIS ON AERIAL PHOTOGRAPHS. By PETER J. HAMAN. *Calgary: West Canadian Research Publications, Series 2, Number 2 1964. 12 x 8½ inches, 84 pages, 21 figures.*

Aerial photographs commonly show straight or slightly curved lines formed by differences of topographic level, valleys, stream channels, differences in vegetation density or vegetation type, or differences in the tone of soil resulting from variations in moisture content. Most of these lineaments are thought to be the surface expression of fractures which may be buried under bedrock or surface deposits of varying thickness. Lineaments produced by geologic processes such as glaciation and wind

action must be separated from those presumably caused by an underlying fracture system. In the first paper the author presents a method of analysing the lineaments in the northern part of an area in Alberta by classifying them into two categories, micro-lineaments which are from 0.1 to 2.0 miles in length (this is redefined as a meso-fracture in the second publication) and macro-fractures which exceed 2 miles in length. Meso-fractures are plotted on a map as the number per unit area, and macro-fracture intersections are plotted to yield a map contoured in intersections per unit area. The macro-fractures are also plotted on histograms that show their average lengths, total lengths, and the number of macro-fractures that have various azimuths. In the second publication, which gives similar analysis for the southern part of the same area, the directions of glacier flow are also plotted to remove one source of confusion. The object of the study ("photogeophysics") is to detect anomalies in the distribution or orientation of the fracture patterns which may be related to underlying geological structures that are concealed by overburden or sedimentary rocks overlying a Precambrian basement.

Of these two papers the second is the more important and contains 84 pages of discussion of the interpretation of the data. Haman assumes, as do many authors, that most lineaments are the manifestations of a fracture system and though he gives a brief discussion of lineaments caused by glacier processes, the possibility that they may have been the result of other surficial processes such as freezing and contraction of saturated soils is not considered. While there is a considerable body of evidence that in many areas such as the Mississippi delta the surface lineaments represent fractures in buried bedrock, it would still seem necessary to consider all the surface processes that could produce lineaments in any area studied.

Most of the second paper is a useful discussion of the mechanics of fracturing and the various fracture patterns that result, followed by discussion of

the world-wide fracture system and its possible causes. The discussion is based on a comprehensive list of 165 references. This paper especially is an important contribution to the geological literature and is of interest to anyone concerned with the analysis of aerial photographs or regional tectonic fracture patterns.

J. A. ELSON

THE ART OF THE ESKIMO. By SHIRLEY GLUBOK, designed by OSCAR VARUS, special photography by ALFRED H. TAMERIN. *New York: Harper and Row. c1964. 25½ x 26 cm., 48 pages, illustrated. \$4.75.*

During the last few years, several very good children's books dealing with the Arctic regions have been published. This is possibly the first to deal exclusively with the native art.

Strictly speaking, this is a picture book. The various forms of Eskimo art are illustrated by excellent black and white photographs arranged on backgrounds of brightly coloured pages.

Most of the objects shown are Alaskan in origin (though the text does not always say so): Canadian Eskimo art is represented only by three soapstone carvings and two sealskin prints, and Greenlandic art by a single drawing by Aron of Kangeq. The captions to the illustrations give the names of the museums owning the pieces. As this book is written for an audience in school grades two to five, the captions might have been more interesting to young readers if they had said where the pieces were made or found and who had carved them.

The text in such a slim volume covering such a broad topic is necessarily brief. General descriptions of the objects illustrated are given, with brief accounts of their purposes or use, and some mention is made in passing of the conditions of Eskimo life.

The book is most attractive in layout, sturdily bound, with a delightful mask on the brightly coloured cover inviting young fingers to open it up to see the treasures within.

NORA T. CORLEY