the use of aerial photographs. Chapter 10 discusses detailed mapping and sampling techniques, including methods appropriate for underground work. Chapter 11 is devoted to the preparation of geologic reports and has especially valuable sections on the proper use of lithologic, fossil, and formational names, and on various methods of illustration.

The last four chapters (117 pages) are outstanding. They treat field work with sedimentary, volcanic, igneous and igneous-appearing plutonic, and metamorphic rocks. The significant textures and structures of each type are described and explained, and appropriate methods of studying and of representing these features are suggested. Numerous illustrations of hand specimens and outcrops are included, and small-scale features are related carefully to larger structures. These four chapters include 79 references to significant work by American and European geologists. Unfortunately, Compton is too modest to cite his own work.

The nine appendixes include lists of necessary equipment and supplies, abbreviations for field notes, and symbols for geologic maps and cross sections. The index is complete. Future editions might be improved by a brief discussion of mineral staining and other chemical techniques that can be applied in the field, and the inclusion of a glossary.

This book is impressive and should become a standard reference in field geology. In addition, the last four chapters make the book valuable as a supplementary text for structural geology and petrology courses as well as excellent reading for all geologists concerned with field studies.

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Aerial Photography

Photogeology. V. C. Miller and Associates. McGraw-Hill, New York, 1961. vii + 248 pp. Illus. $13.50.

Miller's book represents the latest addition to a growing volume of literature on the interpretation of aerial photography, a field that has provided a unique new approach to the study of the earth's surface features, with far-reaching effects on procedures in topographic, geologic, forestry, and soil mapping, and in many fields of research. Miller is concerned primarily with one sector of the general subject, the qualitative interpretation of air photographs as a means of mapping bedrock geology, particularly from the standpoint of mineral exploration.

The volume is divided into three main parts. The first, slightly less than one-quarter of the book, is devoted to the mechanics of procuring, handling, and examining photos, with emphasis on stereoscopic methods. The treatment of distortion and vertical exaggeration of the stereoscopic image is well handled; but the discussion of instrumental techniques is incomplete, and for information on map-making methods and on the use of oblique photographs, the reader must look elsewhere.

The second part, about one-seventh of the total, considers, in a generalized fashion, the principles and criteria of interpretation. The importance of related field studies is given due attention, and the application of the geomorphic viewpoint is properly emphasized. Difficulties and limitations are faced realistically, the need for a flexible approach is noted, and, unlike some other workers, Miller and his associates scrupulously avoid making exaggerated claims.

The third and major part, somewhat more than half of the total, is more particularized; it is devoted to specific examples, as shown on stereopairs of photographs, with accompanying sketch maps, descriptions, and exercises. The examples represent a well-diversified selection of geologic phenomena, of varying degrees of complexity. However, many of these could be more advantageously studied if additional photographs of surrounding areas were provided to give a broader perspective. It is to be regretted that comparisons between photographs and accompanying maps are hindered by differences in both scale and area. Also, the quality of the photographic illustrations, as they are reproduced, leaves something to be desired, particularly in comparison with those in *Professional Paper 373* (U.S. Geological Survey), which covers similar ground. The source of each one is listed, however, and many readers may choose to procure prints of the originals for detailed examination.

A bibliography of more than 350 entries concludes the book. Very few references are made to it in the text, however, and the correlation of references with particular sections of the text is not evident.

All in all, the book constitutes a useful supplement to the available reference material on photogeology, and it should be of some service to advanced students who have a sufficient background in geology and in the study of photographs to use it. The subject is much too broad to be fully covered in any one tome, however voluminous, and new contributions from new viewpoints are always welcome.

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Finsen Memorial Congress

Progress in Photobiology. Proceedings of the Third International Congress on Photobiology. B. C. Christensen and B. Buchmann, Eds. Elsevier, New York, 1961. xv + 628 pp. Illus. $25.

The term *photobiology* has an appropriate connotation that extends throughout almost the entire spectrum of biological activities and subdivisions; as a consequence, one can find photobiologists in many scientific disciplines, including the somewhat more applied areas of agriculture and medicine. The phenomenon that unifies this diverse group is the biological action of photochemical radiations, ranging from ultraviolet on the short side of the electromagnetic spectrum to infrared on the long side. The ionizing radiations, both electromagnetic and particulate, are excluded, arbitrarily it might seem, but also necessarily; the biological action of all radiations, political as well as scientific, is too vast a topic to span successfully in a single congress—this plus the fact that each of the fields of ionizing and photochemical radiations has its own peculiar problems of reaction, instrumentation, and technique.

The interest in these international symposia, of which this is a report of the third, may be appreciated from the fact that this volume contains in excess of 150 papers presented at the 1960 Copenhagen meetings. It is not feasible to single out for review even a selected portion of these papers without doing an injustice to others, but the coverage and extent of interest can be judged by