

BOOK REVIEWS

Hills, E. S. (Editor): ARID LANDS 496 p.p.
London: Methuen Paris: Unesco, 1966. 75s. (U.K.)

Seventeen authors from eight countries and sixteen institutions have contributed chapters to this book. In the foreword, Professor Hills indicates that the book "... was conceived when the Major Project on arid lands under the Arid Zone Programme of Unesco was nearing its end. It was realised that there was no one book which was available for use as a reader for advanced geography classes or for the general public, in which a general conspectus of arid zone geography is given . . ." The resulting geographical appraisal is a collection of twenty essays on the resources, human occupancy and potential use of arid lands. It is certainly not a text of the usual regional geography type.

Diversity is a feature of the arid lands which occupy nearly one-third of the earth's land surface, yet there are recurring themes in the story of man's occupation of these lands. One theme is the deficiency and uncertainty of the rainfall; a second is the range of physical and cultural environments in which man deals with a lack of water; a third is the delicate balance in the environment which can be so easily destroyed by minor adjustments; a fourth is the contemporary speed of cultural change after a long period of only gradual modifications. These themes give the essays a unity, so that while they are obviously the work of experts in particular fields each makes a contribution to the whole.

The review copy of this book is an unbound proof, and the quality of many of the figures is poor, but otherwise the presentation is good. The book will find a place on the shelves of many geographers and libraries as a valuable reference text.

M.J.S.

Lamb, H. H.: THE CHANGING CLIMATE (Selected Papers) 248 p.p.
London: Methuen, 1966 45s. (U.K.)

Most of us have grown up to accept that, in any one place, climate has always been as it is now; that the 30-year average tells all we need to know. Yet particularly since the 1950's many of the older generation have remarked on the loss of the "good old summers we used to have". They say that the climate is changing. This readable book of eight papers by H. H. Lamb written over the six-year period (1959-64) indicates that these "lay meteorologists" are not mistaken. He convinces, with the use of an illuminating collection of facts, that the climate has changed, its variations a result of a complicated mechanism.

The main theme of the book, in fact of each article, is the setting in perspective of data collected from many odd, in addition to more-accepted, sources in order to verify a belief in varying oscillations of climatic conditions since the Würm Ice Age, and more especially in alternating warm and cold periods since man's appearance on earth. Once Lamb establishes the dates of these various cycles, the physical processes at work are discussed. The change in duration and intensity of the atmospheric circulation at certain latitudes is covered, together with the changing amount of solar radiation and volcanic dust levels.

Lamb goes to great lengths to remind the reader that "any reconstructions are tentative as knowledge is incomplete and wrong assumptions as well as misinterpretations are manifest", a statement which tends to caution a reader against any blind acceptance of the hypotheses discussed. An unlikely occurrence, for Lamb, a brilliant tactician, leaves no stone unturned in his attempt to honestly and critically appraise the validity of any hypothesis, however fanciful. When he finally decides to accept an hypothesis, the soundness of his argument, the plausibility of his conclusions and the fullness of the appendices, convince us that this is the correct theory.

Lamb is an avid researcher and can be guaranteed to bring enlightening and often surprising facts to the fore. The adventures of King Harald Hardrade in his exploits in the Arctic indicate the ice- and storm-free nature of the seas, a fact which is often overlooked in the Norse claim for the discovery of North America. Thus a warm period is indicated in historical document, while archaeological remains, such as those of camels in Alaska and tigers in the New Siberian Islands tell a similar story. The most surprising fact upon which he dwells is that within the last 200 years the land and sea ice extent has been the greatest since the Ice Age; in fact we are living in an ice age with 10 per cent of the total land under ice. Using a wide collection of facts such as these, Lamb has not only obliterated the long-held idea that climate is static, but has warned statisticians to be wary of any long-term averages.

Not only does Lamb make characteristically bold sallies into climatic change but he also explains lucidly the path he follows in the formulation of his concepts and conclusions. Nevertheless improvement is possible. The choice in arrangement of chapters, a main feature in the cohesion of any book, has been an unfortunate one. Surely the chapter, "Fundamentals of Climate", incorporating the hypotheses on the general atmospheric circulation, could well have set the scene for the later sections, although the perturbations of the upper westerlies discussed in it deserve fuller and more detailed treatment. This could have been followed by the discourse on the aims of the book, "Our Changing Climate—Past and Present", leading to the work on research methods, a valuable inclusion in writings of this nature. In any research programme a case study is often required to see if a particular example fits the hypothesis. This is accommodated adequately by the chapter on trees and the climatic history of Scotland, while the subsequent considerations given to the earlier variations from our present-day averages conveys us easily to the chapter which summarises those preceding, in its attempts to decipher trends in climatic change. These eight articles, each a brilliant piece of work in its own right, would make greater impact if taken as a whole in this manner, and not considered as individual papers.

It is also surprising that, although a chapter on mapping methods is included, so many of the maps and diagrams incorporated are poor illustrations. Many are too small, while others of more-acceptable proportions are equally obscure, although the main complaint lies in the lack of uniformity in shading techniques, a result, no doubt, of poor reproduction in the printing process, as is apparent in the case of the two photographs used in the book.

Each chapter still breathes of the presentation and style of the publication from which it was taken, for example Chapter 6 and the *Quarterly Journal of the Royal Meteorological Society*. An attempt made to standardise the presentation and in particular the printing type would have been appreciated, one feels. Inconsistencies occur, as in the erratic use of

abstracts for only certain of the chapters, and again in the overuse of maps and diagrams in some passages, while in others, where they would form a valuable addition (as in the "Monsoon" section), Lamb relies solely on the text. It is interesting to note that several maps and figures appear more than once, in fact three diagrams appear four times; two diagrams three times; seven diagrams twice. This is surely overstepping into the "world of pop" where it is said that reiteration is the sign of a "hit". On the other hand, students of climatology using this book (which will doubtless become a teaching manual on the subject) must surely welcome the inclusion of two indices, one for proper names, the other for subject headings.

Here is an author who lives for his subject, and has achieved something that few climatologists can boast of; he has made climate live, he has given climate a history. Here is a man who has so much control of fact and word that he has converted climatic change from being simply an enumeration of statistics into a subject fascinating even to the layman. This book will have a dual role as a classic in climatic change and a working model in research techniques. The greatest praise that a Scot can give this book is that at 45s. (Stg.) it is worth every penny.

G.R.McB.

Brookfield, H. C. and Hart, D.: RAINFALL IN THE TROPICAL SOUTH-WEST PACIFIC

Department of Geography Publication G/3, Research School of Pacific Studies, The Australian National University, Canberra, 1966

This monograph, of unusual shape, 8 x 13½ inches, presents a comprehensive compilation of all available rainfall data for this insular region of the Pacific.

The authors have endeavoured in the short text and various maps to make an interim report on the figures. In a region of this type with areas under different governments, many problems arise, the least of which is the use of both linear and metric scales in addition to the unusual Australian point system. Owing to poor instrumental siting, irregular hours of measurement, and the paucity of completed years of figures, the data is substandard resulting in the authors deliberating inconclusively over the use of means or medians. Realising these difficulties, they introduced the coefficient of variation and, further by the use of Maurer's indices, attempted to eliminate the varying length of record periods although regrettably their results are not demonstrated in map form. The distribution of rainfall is discussed with regard to three four-monthly periods, a long overdue venture of considering rainfall cycles instead of seasons and calendar months.

From the limited data a preliminary examination was executed of intensity, variability, and weather spells, indicating, if nothing else, where new stations are needed which will in a few years provide information for a fuller discussion of these topics. Even allowing for the difficulty of mapping over island areas, the cartographer has made basically simple maps of rainfall distribution appear very complicated.

Some speculation has been made at interpreting the results although many questions are posed and left unanswered. No novel explanation has

been introduced, the three standbys of the general circulation, relief (of which a map is sadly lacking), and local effects based on Defant's local wind system, having been cited for the distribution. The authors, who regard the perturbation theory for the tropical circulation as the recognised model, are too ready to condemn the climatological school of tropical meteorology. Even Palmer (1951) who realises the advantages of the perturbation doctrine, finds fault with it in its "almost complete neglect of the empirical findings of the air mass school". Therefore no matter what the authors say the general circulation of this part of the world is still in doubt.

Although this publication will no doubt be of considerable value for researchers in this area of the Pacific, it can only be thought of as a climatological reference book of data with little depth of interpretation.

G.R.McB.

Palmer, C. E., "Tropical Meteorology" in: *Compendium of Meteorology*, ed. T. F. Malone; American Meteorological Society, Boston, Mass., 1951; pp. 859-880.

Miles, P. M. and H. B.: SEASHORE ECOLOGY 96 pp.
London, Edinburgh: Hulton Educational Publications, 1966

This useful little book published by Hultons in their biological field studies series is intended as a practical work text book for schools and first year students at British Universities. It follows the pattern of the better British and American text books of being very freely illustrated with bold simplified keys to classification and neat clean line drawings. In a brief introduction the authors propose a general scheme of work, dividing practical studies into visits to the seashore for the purpose of observation, identification and listing and related laboratory work setting up marine aquaria, preparing and mounting seaweeds for herbaria and museum display. The descriptions of the methods used are very clear, precise, easy to follow, and quite adequate for students to work independently of full time instruction. There is plenty of space given to explanations of methods of recording data, summarising results and conclusions. All this being made so clear with good diagrams and tables. In fact, the book as a whole represents a great deal of work and thought by the authors, illustrator and designer adding momentum to the revolution in textbooks away from the cluttered publication with poky illustrations and aged photographs, to one in which the publisher appreciates that empty space in the right place is just as valuable as is text.

R.E.L.

Sankey, J.: CHALKLAND ECOLOGY 137 pp.
Heinemann Educational Books Ltd. London: 1966. 16s. (U.K.)

This little book by John Sankey of the Juniper Hall Field Centre at Dorking, Surrey is designed primarily as a guide for British first year students and naturalists. The author's descriptions of his techniques and results should be of great assistance to students particularly should they be doing practical field studies in south-east England.

After the two opening chapters describing chalk, the topography of chalkland, the soils their chemistry and properties, the book discusses the plant and animal life. The chapter on vegetation is broken down into sub-headings dealing with succession, plant communities and associations, history of the flora and morphological adaptations. A brief synopsis of the flora together with lists of plants concludes this part of the book. Chapter 4 deals with the animals of chalkland and in particular relates their populations to the other ecological factors within the environment. These factors are summarised in the following chapter. Mr Sankey devotes the final few pages of this text to a realistic discussion of conservation. The book ends with a brief 'Key to commoner chalk downland grasses and sedges' and a glossary. The illustrations consist of black and white photographs and small line drawings.

R.E.L.

Scovel, J. L.; O'Brien, J.; McCormack, J. C.; Chapman, R. B.:

ATLAS OF LANDFORMS 164 pp. New York: John Wiley, 1965

Four Instructors at the West Point Military Academy have produced the atlas which many teachers of geomorphology, geology and geography have long awaited.

The atlas has a page size of 14 x 12 inches and heavy plastic covers with a spiral wire binding which allows it to be opened flat for use. It contains about 80 maps on scales which range from 1:250,000 to 1:20,000, although most are at 1:62,500 and 1:24,000. Most of the maps are extracts from U.S.G.S. topographic sheets although 8 are from areas outside North America. The usual layout has a map extract on one page with oblique photographs and/or stereopairs and triplets of the same area on the opposite page. In addition there is a comment on the landforms shown on the map, using overprinted letters for indication of features, and in a few cases a block diagram, cross section or sketch illustrating the commentary.

About half the atlas maps are concerned with showing topographic expression of structures—horizontal strata, domes and basins, folds, faults, crystalline rocks and vulcanism. Eleven maps are concerned with fluvially eroded landforms, eleven with results of glaciation, nine with coastal features and seven with eolian influences.

All of the maps are as clear as the original topographic sheets, and in many ways are better for student use because they are smaller. A few of the photographs have lost a little in definition in the printing process but they are still adequate for the purpose.

The comment accompanying each map is necessarily brief, but references are given to further reading. Unfortunately, because of this brevity, some comments oversimplify the explanations for features, and there is an uncritical use of Davisian cyclic explanations for many of the landforms—especially those caused by fluvial erosion. This defect may be inevitable although as the atlas will presumably find most use in university and college classes some warning comments could have been included.

The contents of the atlas are largely restricted to features occurring in U.S.A. and resulting from structural controls and eolian, fluvial, glacial and marine processes. Landforms resulting from development in periglacial

and humid tropical environments are not included. These restrictions are, however, probably the result of attempts to keep down the price of the book. The value for money is still extremely good and it is quite possible that in the next few years the majority of university students, attending geomorphology courses in any part of the English speaking world, will gain much of their practical mapwork experience from this atlas.

M.J.S.

VLasov, K. A.; Kuz'menko, M. Z.; Es'Kova, E. M.:

THE LOVOZERO ALKALI MASSIF 627 pp.

Edinburgh, London: Oliver and Boyd 1966 (U.K.) £12 12s.

This book is a translation of a monograph originally published in 1959 by the U.S.S.R. Academy of Sciences Press and it summarises a vast amount of previously unavailable work on the Lovozero Massif of the central Kola Peninsula. The Lovozero Massif is a classical area of alkaline plutonic rocks and is particularly interesting because of its richness in pegmatites and rare elements.

The monograph is divided into four parts:

- (1) Geological structure and chemical-mineralogical composition of the massif (62 pp.)
- (2) Pegmatites (168 pp.)
- (3) Mineralogy (265 pp.)
- (4) Geochemistry and genesis (102 pp.)

It is well set out, with good content and subject indices and numerous clear figures and tables.

Part 1 (Geological structure, etc.) is the weakest section and it fails to give the reader an adequate background of geological environment, field relations or petrography to appreciate the relevance of the details in later chapters; because of this the book is inclined to lack coherency. For instance, a reader unfamiliar with the terminology of the highly alkaline and feldspathoidal rocks will find no indication in the text of the classification used by the authors or of the diagnostic mineral proportions of the various rock types.

The strongest chapters are those on mineralogy and geochemistry. 120 mineral species found in the Lovozero complex are described in this book; 60 of these (including 11 new species) are rare metal minerals. The mineral descriptions are detailed and in most cases include X-ray and chemical as well as optical data. The geochemistry section is devoted largely to the chemical composition of individual minerals rather than of total rocks.

This book is essentially a wealth of detailed information on the rare minerals of the Lovozero Massif rather than a description of the complex itself and as such it will have little general interest other than as a record of a classical area. However, it should provide valuable information for a geochemist or mineralogist working in alkaline rocks.

P.M.B.

BOOK NOTICES

Hess, W. N. (Editor): SPACE SCIENCE 919 pp.

London: Blackie 1965 120s. (U.K.)

Specialists in the various fields of space science at the Goddard Space Flight Centre (N.A.S.A.) Maryland, have combined to produce a book which gives an historical introduction to the various branches of space science and a statement of current research problems. Most of the fields of astronomy, cosmic rays, atmospheric and ionospheric physics, geomagnetism and geophysics of the moon and planets are covered.

Cotter, C. H.: THE PHYSICAL GEOGRAPHY OF THE OCEANS 317 pp.

London: Hollis & Carter 1965 35s. (U.K.)

This is a concise introduction to oceanography for the general reader. The theories of the origin and distribution of the ocean basins and continents, coastline evolution, the nature of the ocean bed, properties of sea water, fisheries, corals, movements of water and the methods used in modern oceanography are all discussed.

Stokes, W. L.: ESSENTIALS OF EARTH HISTORY 468 pp.

Englewood Cliffs, New Jersey: Prentice-Hall, 2nd edition 1966

The first seven chapters of this beautifully presented and illustrated book are concerned with the methods and principles of geology. Nine chapters discuss the evolution of the earth, and four chapters are concerned with the origin and development of life. A student or general reader requiring an introduction to historical geology is unlikely to find a clearer and more easily read book.

Donovan, D. T.: STRATIGRAPHY 199 pp.

London: Murby 1966 30s. (U.K.)

Although this book claims to be an introductory text it contains considerable detail, especially on the historical development of stratigraphy and on zoning by fossils. Chapters on radiometric dating and systems of stratigraphical classification are included.

Ericson, D. B.; Wollin, G.: THE DEEP AND THE PAST 292 pp.

London: Jonathan Cape 1966 60s. (U.K.)

The dating of the emergence of Man during the Pleistocene has been partly established by the study of deep sea cores. This book is an account of seventeen years of research on such cores and of the conclusions of workers in many branches of Quaternary studies.

Sollers, A. A.: OURS IS THE EARTH. APPRAISING NATURAL RESOURCES AND CONSERVATION 128 pp.

New York: Holt, Rinehart & Winston 14s. 6d. (N.Z.), \$A1.90 (Paperback)

In spite of its title the book is almost entirely devoted to a very brief and elementary discussion of renewable resources—water, soil, forests, range, and wildlife. Only eight pages are devoted to the non-renewable resources and there is little mention of the relationship between resource use and the state of technology. The book may have some value for the general reader.

Schultz, G.: GLACIERS AND THE ICE AGE 128 pp.

New York: Holt, Rinehart & Winston 1963

14s. 6d. (N.Z.), \$A1.90 (Paperback)

This very brief book sets out to give a simple account of the main events of the last Ice Age and the evolution of man during it. The opening chapters are unfortunately littered with similies in which glaciers retreat "like a beaten animal", and advance "to ravage the earth". (p. 10). The quaint mixture of children's storybook and scientific terms is dropped after a few chapters and the accounts of early man in Europe, Louis Agassiz exploring the Swiss glaciers, and the glacial processes are a useful introduction to complex subjects for the layman.

Eklund, C. R.; Beckman, J.: ANTARCTICA 157 pp.

New York: Holt, Rinehart & Winston 1963

14s. 6d. (N.Z.), \$A1.90 (Paperback)

The opening of government purses and the introduction of advanced mechanisation led to an enormous expansion of Antarctic research in the 1950's. The I.G.Y. lasting from July 1957 to December 1958 produced the first major concerted international research effort in the continent and most of this has continued since. This small book, completed by Joan Beckman after Dr Eklund's death, indicates the significance of Antarctic research to an understanding of the earth's magnetic forces and atmosphere and oceanic circulation.

It is almost entirely concerned with the efforts of the United States, but nevertheless gives a clear and readable account of life in a research team and the main fields of research. There are a few minor errors such as the transposing of figures 1-5 and 1-6, and the incorrect spelling of Lyttelton on p. 17 but the book is well set out and a good account for the general reader.

Yasso, W. E.: OCEANOGRAPHY—A STUDY OF INNER SPACE 176 pp.

New York: Holt, Rinehart & Winston 1965

14s. 6d. (N.Z.), \$A1.90 (Paperback)

Oceanography is a very new science, for although the H.M.S. Challenger expedition of 1873-1876, and the German Meteor expedition of 1925-1927 founded the study of oceans there was nothing to equal the findings of these expeditions until the I.G.Y. of 1957-1958. In 1963 there were about 300 research vessels in use, yet the National Academy of Sciences' Committee on Oceanography recommended the construction of 70 new research vessels at a cost of half a billion dollars, or about 2.5 per cent of what it would cost to send a man to the moon. Before the oceans can be exploited for their minerals, water, and food, a massive research effort will be needed. This book presents a brief outline of what is known about the ocean basins, water, circulation and life. Emphasis is placed upon research needs and methods so the text gives an up-to-date account of the subject.

Jackson, N.; Penn, P.: A GROUNDWORK OF PHYSICAL GEOGRAPHY

206 pp. London: Philip 1963

Miller, F. M.: THE PHYSICAL BASIS OF GEOGRAPHY 145 pp.

London: Philip 1964

These two books are designed for middle school use.

Smith, M.: ESSENTIALS OF MODERN GEOLOGY 332 pp.
London: Philip 1965 18s. 6d. (U.K.)

This book will be a useful introduction to geology for middle schools and will also find a place in sixth form work. It includes sections on minerals and rocks, erosional forms, historical and applied geology.

Money, D. C.: CLIMATE, SOILS AND VEGETATION 272 pp.
London: University Tutorial Press 1965 18s. (U.K.)

An attempt is made to introduce recent concepts into sixth form geography in this book. In such a brief outline treatment, especially of soils, is inevitably thin, but a valuable start has been made in providing the background information for soil and vegetation studies, which is usually only provided for discussions of climate.

Linge, G. R.; Frazer, R. M.: ATLAS OF NEW ZEALAND GEOGRAPHY 64 pp. Wellington: Reed 1965 (Paperback)

This monochrome atlas is designed for use in the middle and upper school forms. Each map or set of maps is faced by a page of text. The maps cover the physical features, economic activities and settlements of New Zealand, and six samples of part of the country are shown at a scale of about 1:100,000. The size is $9\frac{3}{4}$ x $7\frac{1}{4}$ inches.

Thomas, J. A. G.: AN INTRODUCTION TO GEOLOGICAL MAPS 64 pp.
London: Murby 1966 6s. 6d. (U.K.) (Paperback)

This practical exercise book, intended for use in school geology courses, has 79 figures and many simple exercises. Block diagrams are used to explain many of the features shown on the maps.

Heller, R. L.: GEOLOGY AND EARTH SCIENCES SOURCE BOOK 496 pp.

New York: Holt, Rinehart & Winston 1962 33s. 6d. (N.Z.), \$A4.35 (Paperback)

This handbook for school science teachers was prepared under the guidance of the American Geological Institute, to encourage a higher standard of teaching in the earth sciences and to make teachers aware of the aids to and methods of good teaching. In each section the basic facts and ideas of geology are given and the methods by which they may be presented are recorded. Appendices give lists of sources of information and demonstration material available in U.S.A.

Ramsey, W. L.; Burckley, R. A.: MODERN EARTH SCIENCE 664 pp.
New York: Holt, Rinehart & Winston 1965 56s. (N.Z.), \$A6.70

This text is designed for use in North American schools. It contains a description of the earth's motion and position in the universe, a discussion of the components and forms of the land surface, earth history, water, and climate.

NOTES FOR CONTRIBUTORS

Aims of the Journal

Articles and communications submitted for publication should be either reports of research or other original contributions of wide interest to those concerned with geology, geomorphology, pedology, climatology, oceanography and physical geography. Reviews and summaries of the present state of knowledge in the various branches of the earth sciences, and papers which explore the interrelations of these sciences and the borders of traditional disciplines will also be welcomed.

Typescripts

Contributions should be typed on good heavy-grade quarto paper, double spaced, with wide margins all round. The top copy and the top carbon copy should be sent to the editor and a third copy retained by the author. All matter to be printed in italic type (e.g. generic and specific names) must be underlined. Style and layout should follow 'Selby, M. J., 1967: Aspects of the geomorphology of the greywacke ranges bordering the lower and middle Waikato Basins. *Earth Sci. Jnl.* Vol. 1, No. 1.'

Abstract

A brief summary indicating the scope of the paper and its principal conclusions should be included at the beginning of all articles exceeding 1,000 words in length. Contributions in languages other than English must have an English language abstract.

Units

These should be consistent throughout the paper. The metric system is preferred.

Footnotes

These should be avoided.

Tables

These are expensive to reproduce and must be kept to a minimum. Each table should have a heading and be numbered in arabic numerals. Units of measurement should be placed in parentheses at the head of the column and not in the body of the table.

Figures

These are to be numbered consecutively in arabic numerals regardless of whether they are half-tones (photographs) or line blocks (graphs, etc.). Each must be referred to in the text and only such figures as are essential to elucidate the text can be published. Figures must be submitted ready for reproduction with all lettering and shading finished in Indian ink, and lettering done by stencil or Letraset in a simple style. The originals should be prepared on Bristol board or white card with a good surface and need not be more than twice the size of the printed figure which cannot exceed 8 x 6 inches (21 x 16 cms.). Figure numbers should not be on the figure itself, only in the caption. The legend should be included within the figure but captions for all figures should be grouped together at the end of the paper. The author's name and the figure number should be written lightly in soft pencil on the back of each figure.

Plates

Photographic prints should be on glossy paper. Components of a composite figure should be firmly mounted on white card and lettered as required—A, B, C, etc. In general no more than two plates will be permitted per article, unless special arrangements are made with the editor. The place at which each figure and table is to appear should be indicated in the margin of the text.

References

In the text references are by author's name and year, e.g. '(Smith, 1960)' or '. . . as stated by Smith (1960)'. The list of references at the end of the paper is to be arranged in alphabetical order of authors' names.

Examples:

Cotton, C. A., 1942: **Geomorphology: An Introduction to the Study of Landforms**. Christchurch, 505 pp.

Cotton, C. A., 1958: The Rim of the Pacific. **Geogr. J.** 124 (2): pp. 223-31.

Two or more publications by the same author in the same year should be distinguished by a, b, c, etc., after the year. Any abbreviations used should conform with those in the **World List of Scientific Periodicals**, 4th ed., 1964.

The manuscript should be arranged in the following order: title page, abstract, text, references, tables, illustrations, captions. Each page of the manuscript must have a number in the upper right-hand corner, beginning 1 on the title page and continuing in sequence to the last page of copy.

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The total number of offprints required should be stated when returning the proof. They will be charged for at the current rate.

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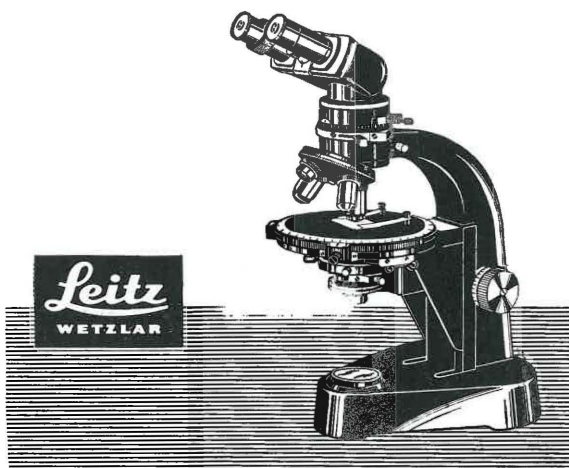
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BOOKS

Cotton, Sir C. A. GEOMORPHOLOGY, 7th ed.
W. & T. 32/6

—— LANDSCAPE as developed by the processes of normal erosion, 2nd ed. W. & T. 47/6

—— N.Z. GEOMORPHOLOGY, reprint of selected papers, 1912-25. W. & T. 42/-

—— VOLCANOES AS LANDSCAPE FORMS, 2nd ed. W. & T. 35/-

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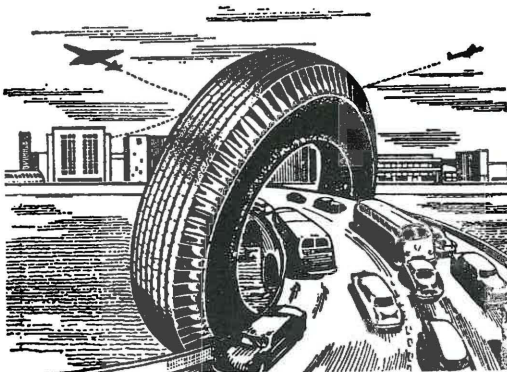
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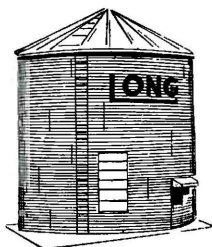
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