

nature of the hypersecretion of gastric acid in patients suffering from duodenal ulcer. Systemic factors are discussed in the subsequent part of the book, and there is a final section dealing with general problems in which the editor presents his own views on the causation of peptic ulcer, using mathematical formulae and theoretical arguments whose validity cannot be assessed in the absence of experimental data.

With the exception of the sections on gastrin and other aspects of gastric-acid secretion there is little here that is new. On the other hand the book does give an excellent and fully documented account of the current limited state of knowledge. It is beautifully printed by the J. B. Lippincott Co. and is the sort of book which is a pleasure to see on one's shelves. The price of £9, however, is likely to deter all but those who are particularly interested in this specialized field of gastro-enterology.

C. C. BOOTH.

Visiting Mars

Life on Mars. By Francis Jackson, M.B., B.S., M.R.C.S., L.R.C.P., Dip.Bact.(Lond.), F.R.A.S. and Patrick Moore, F.R.A.S. (Pp. 111+xi. 18s.) London: Routledge and Kegan Paul. 1965.

As in their previous book, *Life in the Universe*, these two authors discuss their subject with a welcome sobriety untouched by prejudice. Patrick Moore is a well-known television broadcaster on astronomy, and Francis Jackson is a medical man, with a diploma in bacteriology, and a keen amateur astronomer.

Two-thirds of Mars looks like a desert of bright red-ochre material. The remaining one-third consists of darker grey-green areas, which retain their general shape and position, but change their detailed outline from year to year. They also resemble vegetation in undergoing seasonal changes of colour, becoming darker as the nearer polar ice-cap melts, and turning brown in the early summer (not autumn). Yet not a single argument in favour of the vegetation theory is conclusive. The shape of these dark patches is consistent with their being ejected material from volcanoes carried away on trade winds. Many inorganic materials darken, as they do, with increasing moisture. They do not show the spectrum of chlorophyll, though this is also true of some earthly plants, and, as the authors point out, some other pigment might serve instead. Plants give out oxygen during photosynthesis, and there is practically none in the Martian atmosphere; but Martian plants might store oxygen in their tissues for subsequent use in respiration, and anyway many photosynthetic bacteria do not give out oxygen. The spectrum of these areas contains absorption bands characteristic of the carbon-hydrogen bond in organic carbohydrates, yet the bands could be produced by inanimate matter. Polarized-light studies suggest a surface covering of granules which change their size and shape with the seasons. But the same effect could be due to the alternate settling and blowing away of fine dust.

The authors have made some experiments in which they succeeded in growing several earthly micro-organisms in a supposed imita-

tion of Martian soil (sand and limonite), surmounted by an imitation Martian atmosphere (nitrogen and carbon dioxide with traces of water vapour and oxygen, at a pressure of 65 mm. Hg), and subjected to a Martian day-night cycle of temperature (+25° C. to -76° C.). Spore-bearing bacteria did best, protozoa were in general intolerant of the temperature cycle, and cacti died in a single night. Still, the need to sterilize space probes was confirmed. There have been ingenious suggestions that a probe should land on the surface of Mars, pick up some soil, and broadcast any signs of life, such as the production of turbidity in a nutrient fluid.

As to intelligent life on Mars, the authors adopt the majority view that the apparent straightness of the fine lines called "canals" is an optical illusion. They suggest that if an intelligent species ever evolved on Mars it could well have been clever enough to survive any subsequent changes of climate up to the present time.

A final chapter discusses the survival of human visitors to Mars. Present estimates give the density of the atmosphere as equivalent to that of the earth's at 55,000 ft., in which case, the authors say, visitors could dispense with pressure-suits without their blood boiling. But in fact they would still need the suits, because at such a low pressure their lungs would be full of carbon dioxide and water vapour, so that no oxygen could enter. The authors' assumption that the atmosphere would screen the visitors against "undesirable short-wave radiations" is open to doubt. Our earth's ozone layer is formed from the oxygen in its atmosphere. However, visitors to Mars, unlike those to the Moon, would not suffer bombardment by meteors.

A. E. SLATER.

Chemotherapy Report

Third International Congress of Chemotherapy. Vol. 2. Stuttgart, July 1963. Edited by H. P. Kuemmerle and P. Preziosi. (Pp. 1,848; illustrated. DM. 286.) Stuttgart: Georg Thieme. 1964.

The first and largest section in this massive second volume contains 70 papers on the chemotherapy of malignant disease. These deal mainly with well-known synthetic cytostatic drugs, but actinomycin and several other less familiar antibiotics are the subjects of 11 reports. In the section on new chemotherapeutics 18 papers are about semi-synthetic penicillins and 21 about a variety of others, including actinospectacin, rifamycins, fucidin, and nalidixic acid. Fewer papers are devoted to the prevention and treatment of radiation damage the chemotherapy of tropical disease (amoebiasis, trypanosomiasis, and a few helminthiases), the chemotherapy of autoimmune diseases and "pharmacokinetics." There are also abridged reports of seven panel discussions. Research workers and some others may find it necessary to refer to this report to get items of information about what other people are doing or thinking. But, as seems inevitable in such productions, much of the material has appeared elsewhere, and the wheat is not unmixed with chaff.

L. P. GARROD.

Gynaecology

Gynecology. Principles and Practice. By Robert W. Kistner, M.D. (Pp. 654+xv; illustrated. £6.) Chicago: Year Book Medical Publishers. London: Lloyd-Luke. 1965.

The preface to this book states that it "is designed both as a textbook and as a general reference book of gynecology, to meet the needs of undergraduate medical students, young practitioners of gynecology and specialists in this field." This attempt to cater for the widely differing requirements of so varied a clientele has had the inevitable result—there is too much for the student and too little for the specialist. Fortunately, however, the author's main predilection is for undergraduate teaching, and the text is most heavily weighted in this direction. The result is an excellent student manual, indeed one of the best available in the specialty. It follows the general pattern of its predecessor from the same medical school—Graves's celebrated textbook—but it is less cumbersome to handle, more concisely written, and completely up to date.

The system adopted is to describe each organ separately in its entirety, embryology, anatomy, and histology being correlated with its specific pathology, then giving the appropriate diagnostic features and treatment. This system has the disadvantage of occasional redundancy, but is clinically sound. A notable feature is the chapter on pelvic examination, where the various procedures are described with great simplicity and directness, reflecting the author's high reputation as a clinical teacher. The standard of photographic reproduction is high throughout the book, though in contrast to the many excellent photographs some of the line drawings have a curiously old-fashioned appearance, enhanced by the Edwardian print used in their captions. But they are schematically exact and precisely illustrate the relevant points in the text, which after all is their main purpose.

The writing throughout is succinct, precise, and eminently readable, and the book may be confidently recommended to the undergraduate student as adequately comprehensive in all aspects of the specialty.

ALBERT DAVIS.

Skin and Gut

The Skin and Gut in Disease. By K. C. Wormsley, B.Sc., M.D., M.R.C.P. (Pp. 109+ix; illustrated. 25s.) London: Pitman. 1965.

The object of this book is to stimulate thorough clinical examination and bedside observation, and to facilitate interpretation. In his introduction the author says that he aims also to assist in elucidating the nature of the pathological processes in the diseases he describes.

The method he adopts is to give clinical descriptions of the cutaneous and alimentary lesions which may occur together in the course of the same disorder. His descriptions of the skin lesions are sometimes surprisingly brief, but he writes clearly and with admirable economy of words. In most cases only a clinical description is given, and this severely limits the book's scope. The diseases