REVIEWS


The justification for the title of this book comes from the fact that meteorites preserve clues not only to a wide variety of details of our Solar System's formation and evolution, but also to the chemical evolution of the Galaxy before that. Today, we believe that twelve meteorites in our collections are pieces of the Moon and that another nine are from Mars. Some meteorites are products of igneous processing on asteroids or planets; others have never been molten since their formation and are probably debris from the solar nebula from which our Solar System formed. Most meteorites are probably from asteroids, although some micrometeorites may be of cometary origin. Radiometric dating establishes that meteorites — except the Martian and lunar ones — formed at the beginning of Solar-System history, 4·56 thousand million years ago, making them the oldest rocks available to science. Some meteorites carry us even further back in time, for they contain tiny grains of diamond, silicon carbide, and graphite of presolar origin. The lunar and Martian meteorites, and the presolar grains, were all recognized within the last 15 years.

In view of the increasing scientific value of meteorites, this introduction, aimed at the lay person, is to be welcomed. Meteorites is arranged in many short sections, each looking at a different topic, such as 'What are meteorites?', 'Micrometeorites', 'Meteorites and Asteroids', 'How old are meteorites?', and 'Meteorite impact and evolution'. In addition to describing the meteorites themselves, the authors also discuss how meteorite research relates to other areas in astronomy, such as planetary evolution and the formation of the Solar System. Despite being only 60 pages long, with half the space being taken up by illustrations — many of them in colour — the authors pack a great deal of information into the book. The text, which is almost free of typographical errors, is written with commendable clarity. There is a glossary, and also a list of further reading for the reader who wants to find out more.

It is not always easy to make a contemporary research field comprehensible to the lay person without some compromise in accuracy, but Robert Hutchison and Andrew Graham have succeeded admirably in this book. Indeed, it was a delight to read such an excellent introduction to meteoritics. I can recommend it highly to anyone who wants to know why these rocks from the sky really can be called 'the key to our existence'. — JOHN SAXTON.


Since the first use of the telescope, sunspots have intrigued astronomers, and, judging from this monograph, this situation seems set to prevail for some time to come. The book opens with the famous quotation from Richard Carrington (1858): "the publication of speculations on the nature of [the sun's] spots would be a very precarious venture." (not adventure as quoted!). It ends with Gene Parker saying virtually the same thing today: "The present state of detailed knowledge of the sunspot phenomenon presents a host of unanswered questions." The casual reader could be forgiven for concluding that not much has