

The Guide to the Galaxy. N. Henbest and H. Couper. Cambridge University Press, Cambridge, 1994. pp. 265. Price: £35/\$49.95 (hardbound); £17.95/\$24.95 (paperback).

The last two decades have seen great advances in astronomical colour photography and in computer-generated images of data obtained at all wavelengths from both ground-based and space observatories. These made possible the appearance of 'picture books' in astronomy, of which there have been several in recent years. Apart from adorning coffee tables, which they do very well, such publications serve to convey to non-astronomers some idea of the great beauty there is in the heavens albeit inaccessible to the unaided eye. They also transmit some of the excitement surely felt by the astronomers in the difficult and time-consuming process of creating such images. Even more useful is the role that such books can play in arousing the interest of the young, if not in pursuing a career in astronomy, at least to learn of some of its wonders. The book under review has gone much further and could well become a Bible for the amateur astronomer who really wants to know what he or she is looking at whether through a small telescope, or binoculars, or just gazing at the night sky.

A short description of the book on the flyleaf reads:

'Nigel Henbest and Heather Couper take us on a personal tour of the Milky Way in this delightful guide to our home Galaxy. This book is written in non-technical language, for the general reader and the amateur astronomer. The lucid text is supported by a dazzling portfolio of colour photographs of stars, star clusters and gas clouds in the Milky Way. Specially created maps locate the hundreds of tourist spots visited in this journey through space.'

The guide introduces the nature and structure of our Galaxy as a whole. All types of objects that it contains are then described. These include mysterious black holes, the giant globular clusters of stars, every kind of star, regions of star formation, exploding stars and their remnants and the enigmatic objects at the galactic centre, as well as the giant halo surrounding the Galaxy.'

That is accurate as far as it goes, but there is more to the book than that. On

the very first page the authors call their effort 'a celebration of the first clear, panspectral view of our own star-city . . . , a book that could not have been written until now'. Putting together what we have seen through all the astronomical windows from radio to gamma rays, the authors succeed in presenting a 'holistic' picture of our Galaxy illustrated with maps that really 'could not have been drawn up even a few years ago'.

Scattered all through the book, and particularly in the early chapters, are engaging accounts of how certain profound discoveries and advances came to be made by the great names in the history of astronomy. A score of portraits/photographs of particular individuals starting with Galileo adds to the character of the book, much credit for which must surely go to Michael Marten, the picture editor.

The word 'Guide' in the title of the book is serious. The book is aimed at the genuinely interested visitor to the Galaxy and not the kind of tourist that would like to do the Taj Mahal in ten minutes and get back to the hotel. Adopting a geographical approach the authors lead the reader firmly by the hand through the highways and byways of our Milky Way system and keep feeding more information than any intelligent lay reader could ever absorb in one go. The maps, which are brightly coloured, are innovations and contain a lot of information obtained from a variety of sources, much of it in very recent years. There are a great number of large boxes which I found somewhat distracting at first; in retrospect, however, I feel that the number of topics covered could not have been handled otherwise. Indeed, I find it amazing how much astrophysical knowledge has been touched upon as and when relevant to whatever object in the Galaxy or phenomenon in the sky was being described.

Everything said above could well be called praise. Is there any criticism I have of this fine book? Almost nothing as far as the content is concerned, but there were a few places where the choice of words grated a bit. An example of such infelicity is (p. 125): 'Determined to punish Onon's chutzpah, Hera'. Something else which appeared more than once is, . . . star X or black hole Y or whatever weighing 'in at' so many Suns, pp. 205, 245, etc. Astronomical objects are not boxers or jockeys and the authors could

please remove the prepositions in future editions.

To sum up, *The Guide to the Galaxy* is a must for the serious amateur, a worthwhile acquisition for any scientific library and even for the professional astronomer, a source of information outside one's own area of specialization.

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Crustal Evolution of Singhbhum—North Orissa, Eastern India. A. K. Saha. Memoir 27, Geological Society of India, Bangalore, 1994. pp. xii + 341. Price: Rs. 350 00; \$50.

The Precambrian terrain of Bihar–Orissa has attracted the attention of Indian geologists for more than a century, probably because of the presence of rich mineral deposits. The work of Dunn^{1,2}, Jones³, Krishnan⁴ and Dunn and Dey⁵ laid down the basic framework of the geology of this region. Since the middle part of this century, there has been a spurt of research activity on structural, petrological, geochemical and geochronological aspects and the new work has greatly enriched our knowledge on this important segment of the Indian shield. Saha and his group have been in the forefront of this modern research and several of our current notions stem from their work. Saha has drawn on his vast experience in writing this monograph on the geology of Singhbhum–North Orissa, which would remain a standard work of reference for many years to come. In a book of this type the author's own perceptions are bound to come out strongly in the writing, though Saha has made conscious effort to refer to opposing viewpoints. As the title of the book indicates, he has attempted to integrate the information coming from different lines of study to build a model of Precambrian crustal evolution of this terrain.

Chapter 1 places the Singhbhum region in the perspective of the Indian shield by highlighting the salient points about the evolutionary history of the different Precambrian provinces. No mention is, however, made about the Precambrian sedimentary basins, e.g.