

Roving the Solar System

The Planets

by Dava Sobel

Fourth Estate/Viking: 2005. 288 pp.
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William K. Hartmann

Dava Sobel, the science reporter known for her brilliant books *Longitude* and *Galileo's Daughter*, now gives us a beautifully written rumination about the planets and small bodies of the Solar System. In *The Planets* she starts with Mercury and works outwards from the Sun. Those who expect an overview of modern planetary science will be disappointed, however. This modest-sized, pleasant book is a master raconteur's meander through history and astrology, and it dips into modern discoveries only sporadically. The late Carl Sagan covered some of the same territory in several of his books, but, perhaps because he was an active researcher, he gave more of a sense of the mysteries, discoveries and ultimate consequence of cosmic exploration.

I'm a fan of Sobel's historical and cultural sensibilities, and I believe in teaching the history of science, but I get the feeling that someone's concept of a literary book about planets gets in the way here. For example, there's an odd patchwork scheme with each chapter being in a different style. The Earth chapter is virtually all history, yet written in the present tense: "Darwin is sailing" and so on. The Mars chapter, oddly titled "Sci-fi", is a first-person narrative by a 4.5-billion-year-old martian meteorite. The chapter on Uranus and Neptune is mostly in the form of an imaginary letter from the British astronomer Caroline Herschel to her American counterpart Maria Mitchell. A final chapter dwells on a swell party at researcher Andy Ingersoll's house

after the Cassini probe reached Saturn.

Sobel's great strength appears in the chapter on Earth. Here's a real story — the tale of the Earth emerging in human minds as a planet. Here's Ptolemy, recognizing that timing lunar eclipses from different cities would allow estimates of longitudes. Here's Gilbert, discovering magnetism in 1600 and venturing a pre-newtonian view that it might be the force that keeps planets in their orbits. And here's Halley, urging that observers after his death

watch for his predicted Venus transit, in order to triangulate the interplanetary distance scale. This beautiful chapter reminds us that scientists are now in the midst of a progressive adventure, something that the public and most journalists fail to grasp — especially as American fundamentalists recycle erroneous seventeenth-century arguments about the age of Earth, arguments long since settled in Europe.

My qualms returned when I found that many significant physical concepts, such as hydrogen fusion and orbital resonances, are consigned to the oblivion of a 14-page small-print "Details" section, along with additional mythological and historical tidbits. Did some editor win an argument that the delicate sensitivities of readers should not be troubled with pesky facts and basic principles? Moreover, as a colleague pointed out, this section erroneously states that most 'tidally bound' moons are in a 2:1 spin resonance, unlike our Moon. In fact most moons, like ours, are in synchronous 1:1 rotation.

I must also mention my disquiet when the review copy I received was not a marketable copy but an advance review copy. Books, like many other products, are beginning to offer a sobering case study of the so-called free market. The number of distributors providing books to stores has collapsed to just a few, and several are owned by the big bookstore chains. When these distributors make mass purchases to place a book in their own stores, then a book's readership, like an election's outcome, ends up depending on which products are most aggressively marketed. With the marketing departments in control, orchestrated campaigns are the name of the game. Reviewers in such a situation can become part of the advance promotional machinery. To be fair, the final hardback release arrived just as I was about to send in my review. Typos seemed to have been corrected, but it confirmed that the book ignores modern spacecraft imagery.

It is a nice book and it might be a good gift for a literately inclined or 'artsy' friend who is dubiously about science. I was taken aback, however, that in an age of rovers on Mars and landers on Titan, a book named *The Planets* offers the public mostly astrology, mythology, history and archival woodcuts, interesting though they may be. Somehow it reminded me of the genius of the US political consultant Karl Rove, who manages to keep people enthused by distracting them from the real issues. ■

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Virtual life

Louis Bec, a member of the 'artificial-life art' movement, uses computer models to artificially evolve new virtual species from existing organisms. His fabulous zoomorphic forms include the *Melaskunodousse* shown here, which is evolved from several generic ancestors. The French biologist styles himself as the only zoosystematician in the world.

This computer image is one of nearly 300 works described in the book *Kunst aus dem Labor [Art From the Laboratory]* by Ingeborg Reichle (Springer, €49). The artworks analysed by Reichle range from Salvador Dali's *Butterfly Landscape* to Suzanne Anker's contemporary installations, which resonate so powerfully with genetics research.

