

Cosmos Girl

From Mercury to Pluto, Dava Sobel leads a tour of the nine planets of our solar system.

THE PLANETS

By Dava Sobel.
270 pp. Viking. \$24.95.

By MARCIA BARTUSIAK

“SHIMMERING into view as the sun goes down, Venus hangs alone in the twilight,” Dava Sobel writes in “The Planets.” “Who knows how many childhood wishes are squandered on that planet before the gathering darkness brings out the stars?”

The resplendent Venusian orb, both goddess and vamp to the ancients, was indeed my star light/star bright during evening outings as a child, and it remains so to this day. Venus is the essential celestial delight for good reason: not only does it approach closer to Earth than any other planet, but, as Sobel explains, “virtually 80 percent of the sunlight lavished on Venus just skitters off her cloud tops and spills back into space,” lending it its seductively powerful glow.

Sobel has been fascinated with the solar system since she was 8, when she learned to her amazement that Earth had siblings in space. To her they became “precious gems in a little private cabinet of wonder — portable, evocative and swirled in beauty.” And over the next five decades, robotic spacecraft eventually “painted detail upon detail on the planets’ long-blank faces.” “The Planets” is Sobel’s enchanting ode to her lifelong infatuation, a series of cozy essays that gives each member of the solar system its due, starting with the fiery sun that arose out of a vast cloud of hydrogen and stardust some five billion years ago and ending with faraway Pluto, which is undergoing an identity crisis of late since it may not be a planet after all.

Unlike Sobel’s previous works “Longitude” and “Galileo’s Daughter,” “The Planets” isn’t a straight science book or a strict history or memoir but a frothy blend of all these forms. In one chapter, Sobel entertains us with

clia Bartusiak is a visiting professor in the graduate program in science writing at the Massachusetts Institute of Technology. Her latest books are “Einstein’s Unfinished Symphony” and “Archives of the Universe.”

Galileo’s horoscope (which predicted he would travel far), moves to a discussion of Gustav Holst’s symphonic tribute to the planets, and then artfully describes how the Cassini spacecraft reached Saturn last year and soared through a gap in the planet’s legendary rings. Elsewhere, I learned that the last known sacrifice of a virgin in North America to appease a planetary god occurred as late as 1838 and that moon dust smells like spent gunpowder.

Sobel can be remarkably playful. She tells the story of Mars’s tumultuous past through the eyes of a meteorite named Allan Hills 84001, found lying on an ice field in Antarctica in 1984. The dull gray rock was launched toward Earth millions of years ago when a mammoth meteoroid plunged into the red planet, digging a hole several miles wide and lofting tons of debris into space at high velocity. By the end of its harrowing tale, you want to take “Big Al” (as it’s sometimes called by its keepers) out for a beer, if only it weren’t the size of a potato and 4½ billion years old.

TO recount the discovery of Uranus by William Herschel in 1781, Sobel has fashioned an imaginary letter written many years later by Herschel’s sister, Caroline, to the American astronomer Maria Mitchell. Both William and Caroline, an accomplished astronomer in her own right, first thought the newfound object was a comet, an error that Sobel conveys with Jane Austenish flair: “Night after night we strove to fit our observations along a typical comet’s parabolic path, while the object refused to obey our rules and would move stubbornly in a circular arc. All through the autumn it failed to brighten for us; it denied us the delight of seeing it flash its tail. By November the truth finally dawned: the comet was a planet at twice the distance of Saturn!”

For newcomers to planetary astronomy, “The Planets” offers a nimble summary of the latest findings on each planet’s features and geology. For those who avidly followed the journeys of the Mariners, Voyagers and Vikings through interplanetary space, it lets us fall in love with the heavens all over again. □