

SCIENCE NEWS®

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COVER: The Viking 1 landing craft is shown at the first instant when it is truly on its own, 5,000 feet above the surface of Mars. Sent from earth-attached piggyback to an "orbiter" stage, it is encased in a protective, aerodynamic shell when it begins the descent. As the "aeroshell" is jettisoned, a parachute takes over for the next 14,000 feet. The painting shows the second after the parachute has been cast loose, with the craft's three braking rockets just beginning to ignite for last 42 seconds of the journey. A special section devoted to Mars and the Viking mission begins on p. 362. (Painting in acrylic for SCIENCE NEWS by Dexter Dickinson.)

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A Walk in the Martian Woods

*"Arcturus" is his other name—I'd rather call him "star."
It's very mean of Science/To go and interfere!*

*I pull a flower from the woods—/A monster with a glass
Computes the stamens in a breath—/And has her in a "class"!*

A friend sent me those lines from Emily Dickinson, and although my first reaction was a defensive one, they make an excellent point. Mars is a cheerful, comforting light in the sky. Or the god of war. Or the home of the canal-builders. And out in Pasadena, several hundred people are pushing buttons and scanning readouts to dissect an impossibly remote chunk of dry, old rock called Mars to see what makes it tick. Is something out of perspective here? It's up to you.

Project Viking is high technology. No question about it, it's as far removed from a walk in the woods as the Concorde from a butterfly. But if all that comes out of it is a rousing cheer for technological flash—and there's plenty of that—then the real meaning of the accomplishment will have been lost. When Neil Armstrong put his foot on the moon, NASA, including Armstrong, was careful to point out that the feat was the accomplishment of a *system*, extending right down to the last subcontracted rivet. True enough, but there is another kind of satisfaction in realizing that a *human being*—a flesh-and-blood representative/descendant of 100,000 generations of planet-bound earthlings—had simply shown the way for longer walks in an infinitely bigger woods.

There is similar portent for Viking and Mars. It's fine to want to think of Mars only as a pleasant light in the sky, particularly when the alternative is to contemplate a cold, dull ball of stone. But all this science and all this technology offer, to take only one example, a window on the past—a past in which Mars may have had gurgling brooks, gentle breezes and white clouds scudding across an unpolluted, blue sky. Is giant Jupiter any less beautiful because Pioneer 10 and 11 revealed its spectacular face, rather than just a point of light or a fuzzy ball seen through a telescope? The medium, Emily, is not the message here. Beauty is in the heart of the beholder.

This special, double issue of SCIENCE NEWS is nothing but a handbook, a Guide Michelin, to that process of discovery. The frightfully complicated mission is described in detail, and I personally find that knowledge of the process enables me to appreciate each new discovery as part of a fascinating reality, rather than as just a finer-grained embellishment of an academically endorsed fantasy. The possibilities of life are discussed at some length, considering the small probabilities of finding it, because the question so readily brings out the feelings and ideas that are often submerged in other scientific pursuits.

Further indication that the medium is not the message lies in the extent to which graphics have supplemented the printed word in this issue, a matter of conscious decision even given the luxury, for us, of 32 pages. Our specially commissioned cover painting (reproduced with a minimum of type overlay) is the first published work by artist Dexter Dickinson. Though he has been painting "space" themes for about six years, he decided only last year to do so commercially. (His first sale—a futuristic research station in orbit around Jupiter—hangs on my wall.) Anne Norcia, whose cartoons offer a lighter view in two articles, lives on a 162-acre farm in Ohio, is a gourmet cook in numerous cuisines and was sought out by SCIENCE NEWS at the suggestion of Cornell astronomer Carl Sagan and NASA aeronomist Joel Levine. The spectacular, state-of-the-art Mars map that is our centerfold was made available by Harold Masursky of the U.S. Geological Survey, who has been interpreting views from space for almost as long as there have been spacecraft to provide them. The article on Mars itself was deliberately made less than all-encompassing, in part because Viking will rewrite a lot of textbooks, but also in order to leave room for a mini-gallery of the striking photos taken by Viking's predecessor, Mariner 9.

The issue is also intended as a reference. You can't tell the players without a program, and the Viking mission—which could last as long as *two years*—will be more meaningful if it doesn't have to depend for understanding on 90-second telecasts and (after the initial headlines) six-inch, back-page newspaper items. Thus there are tables, providing at-a-glance summaries of the mission timeline (though the later dates and times are likely to drift), the known characteristics of Mars (many of them updated with the most recent interpretations of Mariner 9 data) and the armada of U.S. and Soviet spacecraft that (with many sacrifices) blazed a trail for Viking to follow. In addition, SN's regular book service listing is devoted in this issue to Mars and the possibilities of extraterrestrial life.

In a sense, this issue is not about Viking *qua* Viking at all. Rather, it is intended to open the way to the wonders *beyond* Viking's nuts and bolts—an idea which, I hope, transcends any mere ball of rock called Mars.

—Jonathan Eberhart