structures. Meteor Crater in Arizona is one of the youngest; there are craters in both Canada and the United States which are filled in with rocks hundreds of millions of years old.

Another point of interest: the older books objected to the explosion theory -in an impact crater, produced by the collision of a large meteorite or planetoid with a planet, the rock explodesbecause "all" lunar craters have central peaks, and terrestrial explosion or impact craters don't. Well, all lunar craters do not have peaks, as the photographs in this book or the topographic maps of the Moon now being published by the U.S. Air Force show very clearly. Baldwin interprets the peaks as rebound structures, produced through the millennia by isostatic forces seeking to relieve the strains in the rocks under the crater. "Frozen waves" in the rock, like ripples in water, surround the craters on both Earth and Moon, and on Earth there are other newly discovered telltalesshatter cones in the rock, and highpressure forms of quartz.

The anti-impact school, which includes the English astronomer-writer Patrick Moore and most of the Russians, has a lot to explain away.

KEY OUT OF TIME by Andre Norton World Publishing Co., Cleveland. 1963. 224. pp. \$3.50

In parts of this fourth book in the "Time Traders" series, Andre Norton comes as close to the magical mood and manner of A. Merritt as anything we have had in years. To some, I know, this is not a recommendation; they resent magic, and the spell cast by words. But Andre Norton uses words more sparingly than Merritt did, and this book may be just the place to try their savor.

The four books, nominally juveniles, are adventure stories which span time and space, great mysteries and strange races. In "The Time Traders," Ross Murdock, hero of the new book, went back into Bronze Age Europe disguised as a wandering trader, in search of the wrecked starship from which Soviet scientists were harvest-

ing dangerous scientific secrets. His success brought mankind of our day in contact with the star-roving, hostile empire-builders of the far past, the Baldies.

In "Galactic Derelict" a young Apache anthropologist, Travis Fox, went back into the American southwest of ten thousand years ago to find other Baldy ships-and be snatched away in a wild tour of the universe with stops on world after fascinating world. In "The Defiant Agents," Fox and his Apache kinsmen were sent to colonize one of these worlds, Topaz, and found that the Reds had sent Mongol pioneers to claim it. Now, in the fourth book, Time Agents Ross Murdock and Gordon Ashe are back again. aided by a young Polynesian girl and her team of telepathic dolphins, to probe the mystery of another of the star-worlds, the sea-planet men have named Hawaika.

Hawaika is one of the worlds marked in the Baldy star-atlases-but the cities and civilizations it must have had ten thousand years ago have vanished. Murdock, Ashe and Karara go back-rather, are snatched backthrough a Time Gate, and marooned in the midst of the struggle for power that must have destroyed the planet. There are two divisions of the feudal native race, the land-based Wreckers with their castles on the crags and the piratical Rovers. There are Baldies, hidden in the background. manipulating peoples and worlds for their own unknown purposes. And there are the Foanna, an ancient people who may have been or be as powerful as the Baldies-and who may be the mysterious lost race whose traces we have seen in others of Andre Norton's fascinating books.

Complainers have said there is "nothing new" in the plots of these books. If they want van Vogtian entanglements or world-shaking "revelations," they are right. But the richness which Andre Norton lavishes on her portraits of the wonder-worlds of the Universe, the subtle warmth of the empathic relations she portrays between men and mutated animals such as Karara's dolphins, and above all

the mysteries she suggests and halfreveals but does *not* explain away with glib rationalizations—these, in the words of another book, are *stories*, O my brothers!

FIRST THROUGH TIME by Rex Gordon Ace Books, New York. No. F-174. 1962. 160 pp. 40

"First on Mars," the first novel by this English writer, was one of the best books of its year. The English title, "No Man Friday," described its theme of one man alone on Mars. Gordon's second, "First to the Stars," was something of a letdown. Now he is back in good form with "First Through Time," though the book is still not the stunner that his Martian story was.

Why the author has used an Amercan setting for his book, I don't know. It is barely possible that the publisher has moved it, and perhaps more likely that he was asked to make the switch from an England that he presumably knows well. Howbeit, U.S. government scientists are experimenting with a particle accelerator in a cave in Tennessee when they discover that a bubble of space at the focus of their beam is apparently being transferred into the future. They send an automatic motion-picture ahead, and get a film that shows ruined laboratory, a great gap in the mountain wall, and a strange range of volcanic peaks where the green hills of Tennessee once rolled.

Naturally, a man has to be sent ahead to find out what has happened and what—if anything—can be done to prevent the evident cataclysm. It might have made better sense to send another camera first, to film the catastrophe in the act of happening, but that would simply have stretched out the wordage. So astronaut Howard Judgen rides ahead into a time when a girl scientist's bleached skeleton lies on the floor of the ruined cave, and strange people and a stranger society exist outside.

It's a good story, well handled straightforward adventure rather than satire, though the question of values