

# WAY OUT THERE

**A** LOT of things combined—our cover, our new Poul Anderson serial and even the time of year—make us take a look at the sky. Anderson has the remarkable capacity to think like a scientist and write like a poet. What interests him he can manage to translate so as to evoke interest in the reader; and what interests him in *The Day After Doomsday* is the in-

credible size of our galactic lens.

Start with a single statistic: There are some 80,000,000,000 stars in our galaxy alone.

If Earths almost three billion people owned the stars and divided them share-and-share-alike, each man, woman and child would possess nearly thirty. We can see, under the best conditions, some two or three thousand of them with the naked eye; for

every star we can see, more than twenty *million* are there but invisible—by reason of distance, by reason of intervening opaque clouds of gas or by reason of sheer numbers, so that they are lost in the general brightness we call the Milky Way.

With all those nearby companions (we haven't even touched on the billions of billions in the other galaxies, farther away), it seems a sure bet that we have neighbors in the universe. Almost certainly many of these stars have planets; we have hope that at least a few of these planets may harbor life . . . intelligent life, life of something resembling our own kind. And even a "few" might mean many thousands.

**A**LL in all, the inhabited, civilized worlds in our own galaxy may well be numbered in the thousands or millions.

So why, one asks at once, haven't any of the neighbors dropped in for a call?

Well, perhaps they have. The Earth is old, and organized record-keeping goes back only a few moments of its long day.

Quite a sizable settlement of Sirians or Arcturans could have been built on North America between glaciations, not so very many thousand years ago. There wasn't a human eye on the continent to see it, and its physical

traces might easily have been buried under the debris of the Ice Age. The UFOlogists haven't much doubt that we are being visited even now, for that matter.

Yet we're easy enough to overlook. Earth is, after all, only one tiny planet circling one insignificant sun far out on one of the gassy, pinwheel arms of the galaxy. Sol is itself an outpost. Were we in the dense star clusters around the center we might have had visitors every second Sunday afternoon.

*The Day After Doomsday* gives us a view of what our galaxy may be like, from the point of view of the races who live in it: countless worlds, more interested in their own immediate problems than in fruitless wanderings into remote skies. There isn't any reason why they should exert themselves to visit Earth, after all. And even if we assume them as curious as the Polynesians or as trade-hungry as a Marco Polo, exploration between stars is a slow, tedious task. The distances are not merely linear. It is only some six-hundred-odd light-years from here to Rigel; but the volume of space a Rigellian would have to survey to stand an even chance of running into Earth amounts to half a billion cubic light-years, encompassing many thousands of stars. From the

vicinity of Rigel, indeed, hardly any of the stars in our sky are visible at all to the eye. Our own sun is at best a telescopic object, and even Sirius is no longer within the capabilities of the unaided eye.

And yet Rigel is a near neighbor!

There's plenty of room in our galaxy for many races, no doubt about it. In all that space, the vainest human peacock can hardly imagine himself to be unique.

So, as Anderson says, we're in all likelihood not alone. We are merely out of touch . . .

**C**LOSER to home, by the way, this is a good season for planet-watching.

Of the five bright planets Saturn is one of the more difficult to spot by accident. Hanging in the same part of the sky for years on end, it doesn't betray its presence—as the faster, closer-to-the-sun planets do—by popping from constellation to constellation. It moves, all right. But it moves slowly.

For the past three and a half years Saturn has been in the constellation Sagittarius. About a year ago it was joined there by Jupiter himself. Slowly as Jupiter rolls, he still overtakes Saturn; Jupiter is catching up and in another few months will pass.

Meanwhile the presence of

these two bright objects in the same part of the sky makes it easy to locate them. There aren't any bright stars anywhere near them. If you look to the south and west, not long after dark, not very high in the sky, you'll have no trouble picking them out. The brighter of the two is Jupiter, hugest of planets, monarch of more than a dozen moons. The less bright, but still brighter than any star nearby, is ringed Saturn, a few degrees to Jupiter's west.

Give them a few more months and Saturn will have moved over into the next constellation, Capricornus, Jupiter close behind. Around February they will almost seem to touch. Meanwhile the faster planets—Venus and Mars—will have skipped through Leo, Virgo, Libra and Scorpius to catch up with the slow giants. In February all four of them will be in the same part of the sky. A brilliant spectacle . . . but, unfortunately, not for us Earthmen to see.

The trouble is that a still brighter object will be in the same point on the ecliptic—namely the sun itself. It will take a spaceship to see this particular four-planet conjunction . . .

So don't wait till February. If you want a good look at, at least, Jupiter and Saturn, your chance is now.

THE EDITOR