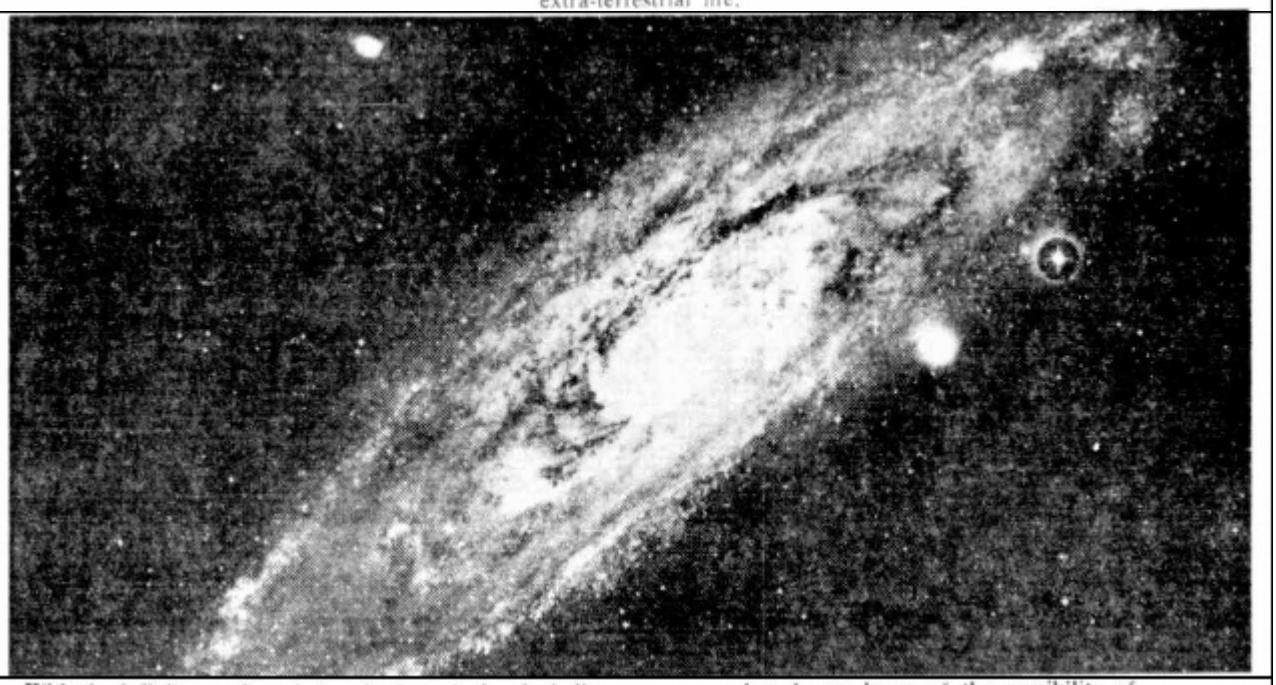
Could there be life on other planets? John Newell, a science correspondent, discussed in a recent article the reports of sightings of Unidentified Flying Objects. Here he turns his attention to two rather more concrete phenomena — strange structures in meteorites and extraordinarily intense radio waves — which have given rise to theories about the possibility of extra-terrestrial life.



With the infinite number of stars in the galaxies, including our own, what do we know of the possibility of . . . . . .

LIFE ON OTHER PLANETS?

From JOHN NEWELL in London

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True, the Ameri
photographs of Mars

Russian descent beneath the clouds of Venus have made it seem less, rather than more likely, that there is any advanced life elsewhere in our own solar system. But the most widely held theories of the formation of planets suggest strongly that in our own galaxy alone there may be millions of stars with planets revolving around them which, like Earth, are capable of supporting life.

Of course only a minute fraction of these is likely to have actually produced life, and a still smaller

life, and a still smaller fraction of those is likely to have produced intelligent beings because, as evolution has shown on Earth, the line that led to Man has been a very thin one: countless other species of animal have thrived without developing man-like intelligence — often indeed have prospered through losing what intelligence they had and becoming degenerate, like many parasites. And yet, despite all this, there remains a possibility — no more — that species of other intelligent beings could exist in our own galaxy; and one can add that, if they do, it is probable that their civilizations are far in advance of our own.

EVIDENCE

Nor can one dismiss as utterly inconceivable the possibility that Unidentified Flying Objects reported over the years could in a few instances be unmanned space vehicles sent out from other civilisations. One can only say that there is as yet no scientifically acceptable evidence for such a conclusion. More interesting however, is the claim by two scientists to have found evidence of a different kind of life elsewhere in the universe.

The two men are Dr Claus and Dr Nagy, of New York, who made a microscopic examination of meteorites and reported, in 1961, that they had found organised structures — some 1,700 of them — which bore an extraordinary resemblance to fossils, but did not resemble any terrestrial species. Almost certainly, the meteorites examined had come to Earth from the asteroid belt in the solar system— the belt of irregular chunks of rock, some several miles across, which orbit the sun between Mars and Jupiter and which could be pieces from a fragmented planet. The inference was that the "fossil - bearing meterorites derived from these asteroids.

Such a theory implied a further dramatic conclusion. If life, even of this primitive kind — for if the structures were fossils, they were the remains only of minute plants and micro-organisms — could exist on an asteroid, then the likelihood of life existing elsewhere in the universe is immediately greatly increased. For none of the asteroids could possess any atmosphere, oxygen, or

asteroids could possess any atmosphere, oxygen or water vapour, and they are many millions of miles further from the warmth of the sun even than icy Mars. But the distinguished British scientist, Professor Bernal, who helped to examine more meteorites, pointed out that natural radioactivity inside asteroids might provide the heat required for life, and that oxygen and water could be obtained from rocks by chemical reactions similar to those used by some bacteria. If life could evolve on an asteroid, it could evolve practically anywhere.

Other scientists besides Claus and Nagy have found similar structures in other meteorites, looking remarkably like the first findings. And very recently, after a long silence, three biologists who have been making a detailed study of the structures with an electron microscope announced that they had found that the "fossils" were far too deeply embedded in the meteorites to be due to earthly contamination, and that they had a structure strongly suggestive of life.

The question remains open. Is there any other evidence of life anywhere else in the universe? Nothing at all convincing, but astronomers who believe that it is conceivable have been excited about a phenomenon in radio astronomy. The possibility that we may have accidentally stumbled upon a sort of interstellar "hot line" — a radio network linking civilisations on planets much more advanced than our own — has been seriously put forward by an American scientist, Alan Barrett, at the Massachusetts Institute of Technology. His suggestion is based upon the discovery of extraordinarily intense radio waves in space which may have many of the characteristics of those produced by the man - made electronic devices called "masers".

Masers are used to pick up faint signals and to magnify them millions of times over; for example, very powerful and advanced masers are employed to amplify the minute signals received at ground terminals, from communications satellites like Early Bird. These radio signals come from small, separate sources, rather as might be expected if they were being used for communications, and some of them even seem to fluctuate as though they might be carrying some form of infor-

ing some form of information.

RADIATION

It is conceivable, so the theory goes, that the intense radiation found is the product of a natural maser action, and one can speculate that radio engineers, far more advanced than ours, might take advantage of such a natural maser to amplify their own signals to a point where they could be transmitted across space to be picked up by civilisations on planets many light years away.

The great impediment to this kind of insterstellar signalling would of course be the immense distances involved. It would take several years to get a reply back from even the nearest planetary system. Or, could a breed of "super - radio - engineers" have found some way to send their signals faster than radio waves normally travel? Quite recently a theory was put forward to explain how certain atomic particles might be able to travel many times faster than light. The idea does not look as mad as it did a few years ago. **Forum World Features.**