

## Forms of Life On Other Planets Declared Likely

Washington (Science Service) — Planets of stars other than the sun very likely have evolved forms of life, and some may have evolved to higher levels of intelligence than man.

Evidence is increasing that the moon and other planets in the solar system have at least the forerunners of the kinds of life known on earth. This is one reason why scientists want to be sure that any rockets hitting or landing on the moon or nearby planets are biologically "clean." Then they can be confident that the samples of microorganisms or whatever is found belong there and were not imported from the earth.

**Organic Molecules**  
The moon may have organic molecules, lying buried beneath the dust and other debris on its surface. There has long been evidence indicating the presence of vegetation on Mars, and recent observations of the infrared light reflected by Mars provide further evidence for vegetation.

Although estimates concerning the numbers of other earth-like planets in the universe vary widely, one often used figure is a hundred million suitable for some form of life. Some of these are likely to be inhabited by living, thinking beings equal or superior to man in capabilities.

**Tolerable Limits**  
Life evolved on earth because certain necessary conditions were within tolerable limits. Many astronomers doubt that these conditions are exclusive to earth. They could occur wherever a planet is located at the right distance from a star to provide the water and warmth that living organisms require.

Scientists working in laboratories have shown that radiation from the sun or electrical discharges simulating lightning can cause the formation of organic molecules from such simple inorganic ones as carbon, nitrogen, hydrogen.

Most recently, organic molecules have been found in stony meteorites, evidence that space conditions are suitable for development of the forerunners of living forms.

Honolulu (UPI) — Wind-blown hot pumice from erupting Kilauea Iki volcano set off brush fires Wednesday when it hit bushes and grass on the rim of the crater.

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# Fertilizers Help Bring Advances In Forestry, Research Indicates

Corvallis — Fertilizers have helped bring spectacular advances in agriculture during the last 25 years and they will do the same for forestry in the next 25, an Oregon State college forest soils scientist believes.

Dr. C. T. Youngberg said research is showing that fertilizers offer great possibilities for increasing tree growth, stimulating cone and seed production, and getting seedlings off to a strong start.

In the case of Christmas trees, nitrogen fertilizers applied in late summer have been found to deepen and improve the green color and there is some indication that keeping quality is improved. Applied in the spring, fertilizers help lengthen the needles.

**Increasingly Important**  
As the population increases and forest management practices become more intensive in the Northwest and the U.S., the role of soil fertilizers and fertilizer treatments will become increasingly important, Youngberg noted.

European countries, hard pressed for adequate timber

supplies, have been using fertilizers on forests for half a century, he pointed out.

At Oregon State college, a research project is now under way on tree nutrition and forest soil fertility. The research will provide basic information as a guide for Northwest fertilizer programs of the future.

Little information is available now on nutrient requirements of major tree species and adequate methods for sampling forest soil fertility are lacking, Youngberg said.

The economics of fertilizers for forests is a basic consideration of course, Youngberg added, but studies elsewhere have indicated that fertilizers do pay good dividends under some conditions.

A University of Washington study with fertilizers on second growth Douglas fir in the Puget Sound region showed a return of about \$3 for each \$1 invested in fertilizers. The test area was in a favorable market location, however.

In many places, the economic factors are against use of

fertilizers now but the great demand seen for wood fiber as the population increases will alter that balance, Youngberg believes. At present, the principal need is for scientific information which can serve later as the basis for cost-return decisions.

**Find Wide Use**  
For the present, fertilizers are finding wide use for special purposes such as nurseries, Christmas trees, and new plantings. Studies by Weyerhaeuser company and the Industrial Forestry association have shown that nitrogen fertilization of young Douglas fir increases cone and seed production.

Crown Zellerbach corporation has developed fertilizer pellets that are used to advantage at planting time to give the new seedlings a boost.

Airplanes and helicopters are being used in some places to spread fertilizers on forest tracts but research still needs to be done in that area, Youngberg said. Sampling forest soils to determine fertility needs is also much more complex than with farm soils since tree roots extend down

several feet into several layers of soil.

Objectives of Youngberg's research at OSC are to develop

## Forger Works in Shadow of Prison

Fort Madison, Ia. — Maxine Shagasta is a forger. And she operates here in the very shadow of the Iowa State Penitentiary with nary a second glance from the law.

Forging the signatures of presidents, princes, potentates and just average citizens is all in a day's work for Mrs. Shagasta. She's an engraver for the Sheaffer Pen Company and earns her living copying sample signatures purchasers have given salesmen in stores throughout the U.S.

"Each signature requires from 20 to 30 minutes, depending upon the length of the name," she said. "Some of the more difficult names are those of foreign dignitaries who use lots of curls and flourishes in signing."

op methods of evaluating soil fertility on forest lands; to determine nutrient requirements and develop deficiency symptom information for different trees; to determine the responsiveness of different forest soils to fertility treatments; and to determine the amount of nutrient drain by intermediate and harvest cuttings.

## Judge Keeps Man From Prison Term

Taloga, Okla. — Robert Carter was brought before the judge in police court on a charge of refusing to pay a \$1.25 taxi fare. The judge learned the man was free under five-year probation so a conviction, even on a minor charge, would force him back to prison.

The taxi driver agreed to drop the charge if he were paid. Carter could only find a dollar in his pockets so the judge said: "It's O.K., I'll pay the quarter."



CARDINAL DESIGNATE CONGRATULATED — Msgr. Albert Gregory Meyer (left), one of the eight new cardinals named by Pope John XXIII, is congratulated by Archbishop Leo Binz of Dubuque, Ia., at the annual meeting of U. S. bishops in Washington. Msgr. Meyer, Archbishop of Chicago, is a native of Milwaukee, Wis.

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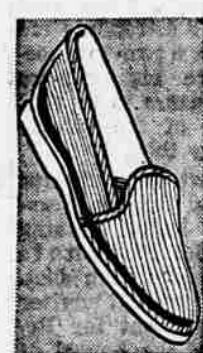
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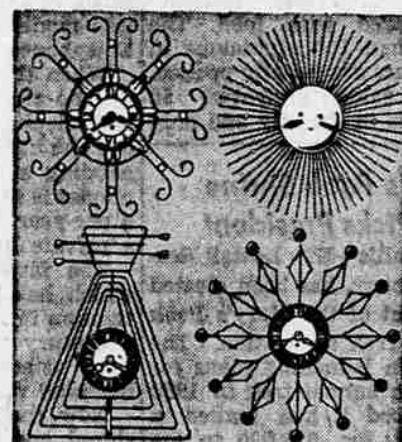
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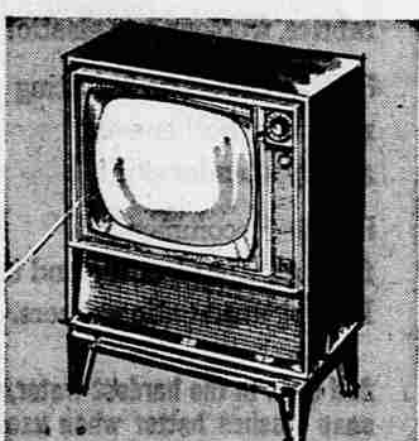


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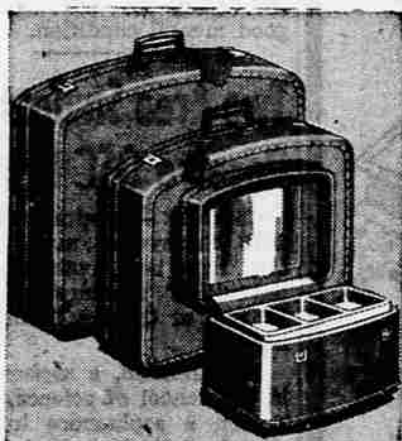


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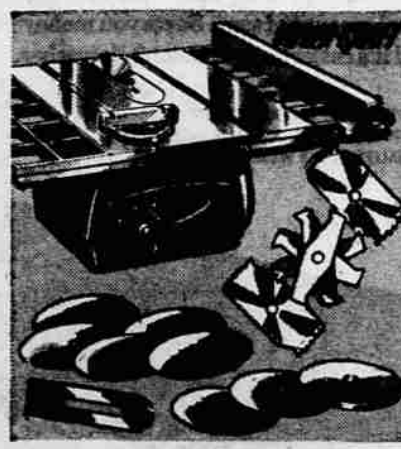
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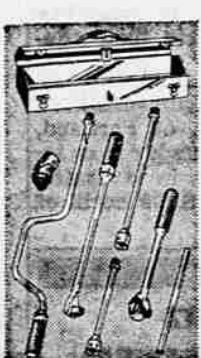
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