

Force Base, San Antonio, Texas. Major Irving Davis, head of the program, described the research at a space symposium of the American Institute of Biological Sciences, Lafayette, Ind.

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## Cancer Found in Trout

► **CANCER** has been found in every trout fish hatchery in the United States.

A national survey conducted on Federal, state and local levels has shown that more than half of all rainbow trout artificially raised have cancer of the liver. The cause of the cancer is unknown.

In some hatcheries examined, every rainbow trout had cancer. The lowest figure reached was 10%, U.S. Fish and Wildlife experts, Drs. S. F. Snieszko and John A. Miller, reported.

The cancerous growth is not very malignant, causing very few fish deaths. No cases have yet been reported in which the disease was transmitted from one animal to another, the scientists emphasized.

"The public should not be excited, because the chances of getting cancer by eating the diseased trout is virtually nonexistent," Dr. Snieszko said.

The commercially prepared dried foods now fed to the fishes may contain the cancer-producing (carcinogenic) substances. The foods contain some meat plus additives such as vitamins and growth stimulants. The dried foods appeared on the market just ten years ago, causing many scientists to suspect them as the culprit.

The easy life of the fishes, eating all the food they want while growing rapidly, has also made the rainbow trout especially prone to diseases, the scientists told the American Society of Limnology and Oceanography meeting at the American Institute of Biological Sciences, Lafayette, Ind.

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## Hormones Aid Flowering

► **COLORFUL PLANTS** such as azaleas, African violets and chrysanthemums bloom much earlier by being injected with new hormones.

University of Wisconsin scientists, Drs. R. H. Roberts and B. E. Struckmeyer, have extracted blossom-stimulating hormones called anthogens from various plants. The hormones were used successfully on about 70 varieties of plants, the scientists told the American Institute of Biological Sciences meeting, Lafayette, Ind.

Three separate anthogens were isolated from plants in various stages of blooming. The hormones were then mixed with water and sprayed on the leaves of young plants.

Anthogens are fatty substances with a greasy feel, belonging to a group not generally credited with having physiological activity. Anthogens are especially promising in treating plants that take a long time to flower. African violets sprayed with the hormones came into full bloom even before tiny blossom buds appeared on untreated violets the same age.

The earlier flowering reduces the ex-

penses of growing greenhouse plants, the scientists said. Rapid growth of leaves, which normally accompanies flowering in nature, was also observed in stimulated plants.

The University of Wisconsin experiments show that the plant's response to days of different length (photoperiodism) is not the supposedly full explanation of why plants blossom. Photoperiodism does set up conditions, called "ripeness to flower," needed before applying the hormones.

The chemicals stimulating the "ripeness to flower" probably interact with the isolated hormones, and the flowering begins, they said.

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## Lichen Splits Into Two

► **LICHEN**, a tiny plant frequently found clinging to rocks, will separate into two plants if it does not like its location.

Lichens, which are actually a partnership between two lowly plants, algae and fungi, will split into these two plant groups if not enough water and food are present. The separated plants will then grow apart from each other, Dr. Vernon Ahmadjian, biologist at Clark University, Worcester, Mass., reported.

Dr. Ahmadjian's experiments show that lichens form "only as a matter of necessity, when both fungus and alga are in need of each other." If conditions favor independent growth, the lichen will not form, he told the Mycological Society of America meeting in Lafayette, Ind.

Algae are tiny organisms familiar to most persons as the green scum found on lake or pond surfaces. Fungi, which include such well-known plants as molds and mushrooms, are parasitic, depending on others for their food supply.

"The two organisms must be forced into forming the lichen," the scientist stated. During the union, the fungus obtains its food from the alga, while protecting the alga from drying up.

The meeting was sponsored by the American Institute of Biological Sciences.

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## PUBLIC HEALTH

### Amateur Divers Advised To Wear Porous Suits

► **AMATEUR DIVERS** are advised to wear suits of porous rubber if they wish to dive in cold waters.

Surgeon Lieutenant Antony Jarrett of the Royal Navy in a study of naval frogmen reported in the British Medical Journal, Aug. 19, 1961, states "reversed ear" was seen in 14. This is a condition in which tiny hemorrhagic spots appear in the ear canal, caused by a partial vacuum within the watertight rubber suit worn by the frogmen.

The basic cause of the reversed ear syndrome, Lt. Jarrett says, is that the watertight rubber suit converts the external ear canal into a closed cavity within which the pressure may fall below that of the body.

A porous rubber material cannot possibly

maintain a partial vacuum, the surgeon officer added, so the hemorrhagic spots that form in the skin under the wrinkles of a watertight suit do not form. A porous suit maintains body temperature efficiently, he reports, as it fills with and holds water in the same way that a woolen garment normally fills with and holds air.

Ear plugs should never be worn when traveling by air or when diving, Lt. Jarrett says, as there is danger of reversed ear when anything closes off the external auditory canal. "Reversed ear" is a term that has long been used by professional divers, but it is only this year that Lt. Jarrett reports the cause in Great Britain.

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