

## VITAL STATISTICS

# Family Growth Controlled

► THE PROPORTION of married couples in the United States who try to regulate the number and spacing of their children increased markedly over the last five years, the Scripps Foundation for Research in Population Problems, Miami University, Oxford, Ohio, has found.

In 1955 seven out of ten white couples with the wife 18 to 39 years old had used some method to regulate family growth. Now the proportion is eight out of ten.

Periodic continence, commonly called rhythm and acceptable to the Catholic Church, is one of the popular methods of contraception. A majority of couples use other methods, however.

These are the first findings from the 1960 study of family growth patterns being conducted by the Scripps Foundation and the Survey Research Center of the University of Michigan. Interviews were completed with more than 3,300 wives in the childbearing ages. More than 2,700 wives were interviewed in 1955.

Both groups are representative samples of wives of childbearing age in the United States.

The investigators found that the more widespread use of contraception by married

couples in 1960 than in 1955 is due chiefly to the lower age at marriage since World War II. In the late 1940's and early 1950's, the number of marriages was unusually large because so many couples were marrying at younger ages than formerly.

Once married, they proceeded to have the children they wanted with no more delay than formerly. The result was the concentration of childbearing at younger ages and its curtailment at older ages, in spite of some increase in average family size.

The new pattern of younger marriage was well established by 1955, hence the number of marriages between 1955 and 1960 was not unusually large. Couples in which the wife was under 40 in 1960 had been married longer than had those with wife under 40 in 1955. More of them had all the children they wanted and were trying to keep from having additional children.

The larger proportion of couples who have all the children they want and the increase in the proportion using contraception help to explain the lower birth rates of the last year shown by the National Office of Vital Statistics.

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other geometrical arrangements with which aeronautical engineers must deal.

M.I.T. is changing its approach to laboratory instruction to emphasize individual projects, Prof. Mollo-Christensen reported in *Technology Review*, Dec. 1960.

"Lecture demonstration apparatus," he said, "should show something interesting and pertinent in a way that students will remember it. It also should be portable, and have infinite shelf life. It should not be useful for anything else, such as research, however, since it then would be borrowed and modified to an extent which would make it useless."

His new miniature wind tunnels meet these requirements. With the help of students, 20 different slides containing various types of tunnels have been designed and constructed in his laboratory. They are one of several new aids to teaching now being introduced in the M.I.T. School of Engineering.

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## GEOLOGY

## Quake in Yellowstone Exposes Buffalo Tracks

► WHEN THE EARTH SHOOK in Yellowstone Park in August, 1959, due to a severe earthquake, hot pools were changed into active geysers, quiescent steam vents were rejuvenated, and other regular hot water phenomena went dormant.

A glimpse into the Park's human history was also provided, when many layers of rocks were eroded away in the biscuit basin, exposing a moccasin track of an early Indian and buffalo tracks. Both were fossilized in the geyserrite rock.

The moccasin print and several buffalo footprints are within a few feet of the rim of Sapphire Pool. Several feet of rocks were carried away in this area since Sapphire Pool experienced the most violent and spectacular change of all hot water features since the quake. Formerly a quiet hot pool, it started erupting as a geyser. In some eruptions water is thrown 150 feet into the area with a spray up to 200 feet wide.

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## AGRICULTURE

# Plant Disease Compounds

► AN ANTIBIOTIC and an antifungal agent have been found effective in fighting plant diseases.

Experiments with tetrin, the antifungal agent, showed it capable of preventing growth of all the fungi tested, animal as well as plant pathogens, but inactive against bacteria.

When applied by spray, tetrin was non-toxic to tomato, beet, pea, radish, broccoli, and soybean plants. Even at high concentrations it did no harm to some crops and usually did not affect germination.

The new antibiotic, a compound called P-9, was described as "highly potent, persisting, fast-acting and translocatable." It is expected to be effective in controlling cereal rusts.

Both the antifungal agent and the antibiotic were synthesized by the mold *Streptomyces*, scientists report in separate articles in *Phytopathology*, Nov., 1960, journal of the American Phytopathological Society. Tetrin was described by Dr. David Gottlieb and Hugh L. Pote of the University of Illinois. A Merck Sharp & Dohme Research Laboratories team, Rahway, N. J., reported on the new antibiotic.

In a third report, three U. S. Department of Agriculture scientists, Robert P. Kahn, T. C. Allen Jr., and W. J. Zaumeyer, described a plant-virus inhibitor isolated from rice that, like P-9, seems to act on the plant-host rather than on the disease organism itself.

In experiments with 15 viruses the inhibitor proved to be effective with all but three. The experiment suggested that rice extracts may prevent tobacco mosaic virus infection of beans if applied before infection, or retard virus multiplication if applied shortly after.

In past experiments using "wonder drugs" to combat plant disease, the compounds not only destroyed the viruses and fungi but killed or harmed the plants. These new compounds may become effective tools for safely treating diseased plants.

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## EDUCATION

## Lecture Slides Show Wind Really Blowing

► STUDENTS REALLY "see" the wind blowing now in classes at the Massachusetts Institute of Technology in Cambridge.

Prof. Erik Mollo-Christensen is using new lecture slides, each one containing a miniature but actual working tunnel. The slides, about one inch thick, fit into a special projector.

What happens in the wind tunnels can be seen greatly enlarged on a screen when the slides are projected. A vacuum cleaner attached to one side of the projector provides the wind. Red fluids inside the slides show effect of wind on nozzles, airfoils and



FOSSILIZED BUFFALO TRACKS