

METEOROLOGY

Hurricane Warning System Now Ready

► THE HURRICANE HUNTERS, as the U.S. Air Force and Navy airplanes are called, officially went to work on June 1.

As part of the vast hurricane warning pattern put into motion by the U.S. Weather Bureau, Navy and Air Force's Weather Service, the reconnaissance airplanes have started to spy on hurricane formations at sea.

The watery area over which they stand guard includes part of the Atlantic Ocean, the Caribbean Sea and the Gulf of Mexico where these monster storms originate during the summer months, when temperature, pressure and winds are conducive for their formation.

Actually, these large storms that sweep the eastern part of the United States every summer may not become serious until August, September and October. But there is no set pattern for predicting hurricanes, U.S. Weather Bureau officials said in Washington, D. C., and advance preparations for spotting the storms are underway.

Another guard is already busy watching for hurricane formation—Tiros VI, the successful satellite with two wide-angle lens cameras that can scan an area 750 miles across. Another such satellite may be launched the middle of this month, when the hurricane season officially begins.

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ANTHROPOLOGY

Beer Party Is Basic To Tarahumara Life

► THE TARAHUMARAS—a Mexican Indian tribe—love their beer.

A beer party is the "basic social activity" of this tribe, Dr. John G. Kennedy of the Social Research Center at American University in Cairo has found.

The beer party is the place where business is transacted and pleasure is found, where human relationships begin and sometimes end, and where the law is broken and justice is done.

All this happens over a beer, Dr. Kennedy explained, because of the extremes in Tarahumara life. Most of the time the men and women work alone. Herding goats, checking the whereabouts of free-roaming cattle, cooking and child care are tasks done in isolation. Men and women may not see or talk to others outside their own household for days and sometimes weeks at a time.

Then comes the beer party, *tesguinada*, and they make up for lost time. All types of social activity are compressed into the brief moments of the beer party.

Usually a man calls a beer party when he has a chore to be done. That his guests will work in his field or on his range before drinking is taken for granted.

Despite the fact that the beer party holds the Tarahumaras together, there are some times when it backfires. A drunk man may totter off a cliff, a woman may drop her baby in the fire. Disease may be passed

around as the drinking vessel goes from mouth to mouth. Sometimes work is left unfinished. Corn to make beer for one party is the equivalent of a month's food, and hunger may come on in the lean month before harvest.

Nonetheless, Dr. Kennedy has found, the stabilizing value of the party outweighs its costs. Reporting to the American Anthropologist, 65:620, 1963, he cautions those who put a moral interpretation on drinking to take another look at its positive value for the Tarahumaras.

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HORTICULTURE

New Strawberry Grows Faster Than Average

► A NEW VARIETY of strawberry plant, with juicy berries about an inch and a half in diameter, now yields more than 10,000 quarts per acre—higher than the average strawberry yields in the Northeast.

The new berry requires more frequent harvesting than some other varieties, horticulturists at the College of Agriculture, Rutgers University, New Brunswick, N. J., report. Plants require harvesting about every day and a half, rather than every other day as other varieties need.

Named *Vesper* because it is ready for picking late in the New Jersey strawberry season, the new strawberry has been tested for three years at the Agricultural Experimental Station, scientists report in New Jersey Agriculture. It has recently been released and plants are being sold by several commercial nurseries this spring.

Vesper compares in size to another strawberry variety, the *Jersey-belle*, which is the largest in the East. Well adapted to states in the Northeast, *Vesper* has thrived in Long Island, but is not recommended south of New Jersey.

Like most strawberries, it is susceptible to *Verticillium* wilt, a fungus disease common on tomatoes, eggplants, okra and white potatoes. That is why agriculture specialists advise not planting *Vesper* after these vegetables for at least three years.

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AGRICULTURE

World Growing Peanuts At All-Time High

► HAVE another peanut—the world has 16 million tons of them.

This record production of peanuts in 1962 is four percent higher than the amount produced in 1961, and 12% above the 1955-59 average, the U.S. Department of Agriculture reported in Washington, D.C.

South America produced more peanuts early in 1962 than ever before. Countries there, especially Argentina and Brazil, produced one-fourth more than a year ago, and 86% more than the 1955-59 average. Nigeria was the record-breaking producer in Africa, while U.S. production increased only slightly from last year, with record high per-acre yields in the Virginia-Carolina and Southwest areas.

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SOCIOLOGY

June Brides Increase Population Problems

► EACH OF the 200,000 brides married this June will add to U.S. population problems.

By the time she is in her 30's, the now-new wife will have had an average of 3.4 children. The U.S. population can only stay stable with an average of 2.7 children per wife.

Children are getting to be more and more expensive. The cost of living has gone up 35% since the end of World War II. Cost of a college education is well on its way to doubling.

Such conditions, the Population Reference Bureau said in Washington, D. C., may lead to a drop in the birth rate.

The youngest wives, and wives in their twenties, seem to be heading toward smaller families. There are also indications, the Bureau said, that early marriage and early parenthood are not as popular as they have been in recent years.

These factors may reduce the population problems that U.S. brides create.

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MEDICINE

It's Hard to Fake A Cold at NIH

► EVEN THE WORLD'S top medical people sometimes catch colds. But when the bug sends employees of the National Institutes of Health sniffing home to bed, they keep right on doing research in medicine.

For the past seven months employees at the Institutes, Bethesda, Md., have been volunteering to serve in a common cold study. In order to qualify, they have to catch a cold.

Three days after an employee notices his first cold symptom, he is studied by the staff of Dr. Robert M. Chanock of the National Institute of Allergy and Infectious Disease. The staff studies the employee again three months later to compare results.

Dr. Chanock, who is trying to track down viruses responsible for colds, suspects the viruses would be most active three days after the first symptom. His staff puts samples of nasal washings into tissue cultures to see if a virus can be separated. The staff also studies blood samples for antibodies.

"So far we haven't found anything," Dr. Chanock said, "but the study is just underway."

Mrs. Hilda Kennedy, staff nurse in charge of registering volunteers, said she has made at least one casual observation of the 120 employees to take part in the study thus far. During a long stretch last winter, she said, employees reported suffering a scratchy throat followed by a runny nose.

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CE FIELDS

TECHNOLOGY

New Device "Listens" To Particles of Dust

► THE SOUND of dust now is being added to this already noisy world.

Scientists have made an instrument that can hear particles of dust as they travel in an air stream.

A ragweed pollen sounds like the crumpling of a paper bag, stated Gerhard Langer, chemist at the Armour Research Foundation of Illinois Institute of Technology in Chicago, Ill. Atmospheric dust makes even louder noises, he said, and can be heard across a room.

The dusty noise-makers are heard as they rush in an air stream through glass tubing of the equipment. An electric pump forces this air stream at high velocity through a restriction in the glass tube. A microphone with an amplifier can be attached to increase the sound intensity, and an oscilloscope can be connected to make the sound waves visible.

The equipment, still in the experimental stage, can be produced at far less cost than usual automatic particle counters, Mr. Langer said.

The instrument can be used to measure dust-like particles in the scrupulously clean areas of missile assembly plants. Or it could be attached to a balloon and sent into the clouds to calibrate the size of drops of fog.

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ENTOMOLOGY

Spare That Spider! It's Eating Our Insects

► RUN IF YOU WILL, but don't kill that spider!

Spiders are one of man's best friends—at least in the all-out war against pesty insects. They have their own natural way of destroying flies, beetles, locusts and all the other insects that plague our fields, houses and gardens. Human beings do not have to fear that spiders are poisoning the atmosphere with deadly chemicals.

Spiders are much misunderstood, Dr. Philip Spear of the National Pest Control Association stated in Elizabeth, N. J. With the exception of a few members, spiders are harmless to man. But they are lethal to millions of insects invading the human domain each year. They are shy creatures, and will bite only in self-defense, when they are hurt or frightened.

These natural insecticides are not insects themselves, as many believe. They are members of the arachnid family, similar to mites, scorpions and ticks. They have eight legs, rather than the six legs that characterize the insect family. Also spiders have several eyes—as many as six or eight.

These creatures are most successful in adapting to different environments, Dr.

Spear said. They have been found thriving in the Arctic as well as the tropics, near the edge of the sea and close to the snow-line of mountains, in the desert and in the jungle. They range in size from four-inch tarantulas to tiny specks living by the millions in grasses of lawns and pastures.

Probably no other species, even including the birds, consume insects in "such astronomical total tonnage," stated Dr. Spear. We would be wise to leave the spider alone to do its good work in reducing the insect population.

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SOCIOLOGY

Welfare Misconceptions Examined and Cleared

► THE PUBLIC misunderstands welfare. "Most people think public welfare is for other people." They forget about the wide range of programs welfare includes; they do not realize that programs from Aid to the Blind to Social Security touch "virtually everybody."

Misconceptions are cleared away and the facts set straight in a new pamphlet issued by the Public Affairs Committee.

The pamphlet examines the policy of rehabilitation and recommends improvements for welfare administration. It is available for 25¢ from the Public Affairs Committee, a non-profit educational organization in New York.

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GEOPHYSICS

New Satellite Design Needs More Solar Cells

► SATELLITE DESIGNS would have to include more solar cells, or better shielding of the cells already present, if they are to withstand an increase in intensity in the radiation belt circling the earth.

Some satellites have been damaged by exposure to the artificial belt, Dr. S. Fred Singer, National Weather Satellite Center, U. S. Weather Bureau, said at the 44th annual American Geophysical Union meeting at Washington, D. C. But others, such as Telstar and Tiros, still retain their working solar cells. These satellites, he said, had been "over-designed, either by having a larger margin of safety on power, or by the use of some radiation shielding."

The effects of exploding a bomb in space, creating higher intensities in the radiation belt, Dr. Singer said, are "closely predictable, small and harmless" for the following reasons:

1. Human activities have not been affected. The increase in the belt intensity cannot, for example, produce genetic mutations, except on persons actually exposed to the environment in space. This, Dr. Singer said, is unlike "nuclear tests conducted within the earth's atmosphere, which produce fallout."

2. Addition of new particles in the radiation belt has advanced scientific exploration of that area.

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MEDICINE

Plaster Cast Transmits TB-Like Fungus Disease

► A TUBERCULOSIS-LIKE fungus disease went through a plaster cast to infect six persons in contact with the patient, a group of California physicians reported in Denver.

The disease, called coccidioidomycosis, or San Joaquin Valley fever, affects about 10 million persons, principally in the Southwest. The chronic pulmonary illness is caused by a fungus, or mold, known as *Coccidioides immitis*, which is apparently inhaled in dust that carries the spores.

The plaster cast from which the organism was recovered had been applied to a bone infection caused by the coccidioidal fungus. The infection was draining, and six hospital personnel developed symptoms.

Dr. Bertram H. Echmann, chief of the tuberculosis service of Riverside County General Hospital, Arlington, Calif., reported the indirect, man-to-man spread of the disease at the meeting of the National Tuberculosis Association and its medical section, the American Thoracic Society. Collaborating in the report were Dr. Gershen Schaefer, also of Riverside County General Hospital, and Dr. Milton Hupert of the Veterans Administration, San Fernando, Calif.

Dr. James E. Perkins, managing director of the National Tuberculosis Association, told the meeting that in this country, at least, the real TB problem is previously infected individuals. This is a group for which some way must be found to reduce markedly the incidence of active disease if we "are to speed up" appreciably our progress toward eradication.

The death rate is no longer an indicator of the TB problem. Dr. Perkins said that with modern drugs, the TB death rate should be zero, even though the rate of illness from TB is high.

However, nearly 10,000 persons a year are still dying in the U. S. from TB, and nearly 55,000 new cases of tuberculosis were reported in this country in 1962.

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BIOCHEMISTRY

Guinea Pig Serum Could Treat Human Cancer Cells

► AN ENZYME found in guinea pig serum has been so effective against new leukemias in mice that test tube experiments with human cancer cells have been suggested.

The same enzyme, L-asparaginase, has also been found in the blood of a number of South American rodents closely related to the guinea pig.

These findings, reported in *Nature*, 198: 801, 1963, were the result of experiments by teams in the division of experimental chemotherapy at Sloan-Kettering Institute for Cancer Research, Cornell Medical College, New York, and the department of pathology, New York University School of Medicine.

The teams were headed by Drs. Lloyd J. Old of Sloan-Kettering and Edward A. Boyse of NYU.

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