

## LINGUISTICS

## Cambridge Man Explains Oxford Accent

**A**N EXPLANATION of the Oxford accent, so generally accepted as the brand of "culture," has just been offered by a Cambridge graduate, H. St. John Rumsey, instructor for speech defects at Guy's Hospital, London.

The accent is a drawl, prompted by a peculiar state of mind, and anyone can imitate it merely by tensing the muscles of the throat instead of relaxing them. Such faulty technique in voice production produces the weary tone without the prerequisite of three years attendance at an English university.

"The speech mannerism which has been called the Oxford accent," declared Mr. Rumsey, who is an expert in phonetics, "is not due to any incorrect mouth shapes, but to the basic vocal tone which gives an impression of weary boredom with life in general and the immediate audience in particular."

However, Mr. Rumsey has found more Oxford draws among the artistic young men of Chelsea, London, than in the two old universities of Oxford and Cambridge combined.

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## ANTHROPOLOGY

## Mexico Studies Mixed Breed Problem

**W**HAT HAPPENS when races mix their blood is being studied scientifically in the case of Otomi Indian and Spanish cross-breeds in villages of the Ixmiquilpan region of the State of Hidalgo. How the mixed breeds of human beings reproduce themselves in comparison with the pure races from which they sprang is being measured. The results of the investigation are expected to throw some light on the disputed question as to whether hybrids or pure breeds are best.

A sociological study of Mestizo and purely Otomi families form the basis of the study. Birth and death data and other information three generations back is being gathered. The economic and health conditions of each family are also brought into the picture. These latter are important factors in population progress, for they influence the trend which might be due to race alone. Anthropometric measurements covering the entire family, in each case studied, are likewise being made.

The expedition making the investigation is directed by Dr. Conrado Gini, professor of demography and sociology in the University of Rome. Other Italian scientists taking part are Prof. Giuseppe Genna, anthropologist, and Dino Camavitto, sociologist, likewise from the University of Rome. The Mexican government is cooperating officially, by detailing medical and other technical personnel, who form the majority of the expedition of twenty. A female nurse accompanies each doctor because women instill more confidence among primitive groups than men alone, and because native women who must be examined often object to being measured by men.

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## BACTERIOLOGY

## Tests for Food-Spoiling Germs Need Standardizing

**T**ESTS for bacteria that cause foods to spoil need to be standardized, members of the American Public Health Association were told by Lawrence H. James of the Bureau of Chemistry and Soils, U. S. Department of Agriculture.

Mr. James termed such standardization a "present necessity." It will aid in the better protection of the health of the consuming public. It will also pave the way for the development of improved methods of food preservation.

"The quality and safety of many foods depend upon the control of spoilage bacteria, yeasts and molds," he said.

At present, different laboratories use different methods for detecting these organisms. No detailed directions, simplified and standardized for general use, are available. Every state in the Union conducts some type of official food analysis and practically all cities of metropolitan size, with populations of 500,000 and over, maintain food analytical laboratories. In addition, many college, university and consulting laboratories are called upon to make analyses in which they have had but little experience either with the food products or with the special methods required.

Mr. James reported that a committee of the American Public Health Association of which he is chairman, has secured the official cooperation of that organization, of the Society of American Bacteriologists and of the Association of Official Agricultural Chemists in organizing a group of experts on food bacteria to develop standard procedures for the microbial analysis of foods.

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# IN SCIENCE

## METEOROLOGY

## Twin Hurricanes Boost Total to Eighteen

**T**HE SEASON'S third pair of hurricane twins, developing locatable centers on Tuesday, Oct. 3, raised the 1933 record for tropical storms to a new all-time high, both for total number of these big disturbances and for the number of them found travelling in pairs. So C. L. Mitchell of the U. S. Weather Bureau reported. Eighteen major tropical storms are now on the 1933 slate, as against sixteen for 1887, the next highest year of record. And there is still at least a month to go before the hurricane season closes.

The major disturbance, coming almost straight north out of the Caribbean, centered near Havana on Wednesday, Oct. 4, with wind velocities as high as 72 miles per hour. The second hurricane area was reported out over the Atlantic in the neighborhood of Turk's Island, believed by some geographers to be the first land sighted by Columbus.

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## ECOLOGY

## Lake in Yellowstone Has Floating Island

**C**RESCENT LAKE, in Yellowstone National Park, has a mysterious island that for long has been observed to change its position constantly.

Recently park rangers believe they have solved the mystery. After examining the island closely, they have come to the conclusion that it is made up solidly of rushes and beaver cuttings which have become bound together over many years by plant growth.

At the present time beaver are piling the island surface with new cuttings and the rangers believe eventually a new gigantic beaver hut will be erected on the floating island. Indications are that the beaver are attempting to anchor the island solidly to the floor of the lake, but so far it remains unmoored. Eleven adult beaver inhabited the lake during the past summer.

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# CE FIELDS

## PUBLIC HEALTH

## 50,000 Indians Blinded By Bite of Red Fly

**T**HE BITE of a little red simuliid fly has brought blindness to some 45,000 Indians in Chiapas and 5,000 in Oaxaca, according to the Mexican Health Department.

The life history of the parasite which the fly deposits in the blood of man is now known, but no good remedy to combat it has been worked out.

Because the Oaxaca region is small, Health Department brigades have chosen it as a field of experiment. The larvae of the flies are found among dead leaves along creek and river banks, and by cleaning these and burning the debris some impression has been made on the blindness epidemic.

Tumors appear on the heads of those affected, and these are being operated on by the wholesale by the sanitary brigades. This eventually cures the individual if the disease has not gone too far. The tumors are filled with long, thin, coiling organisms that can be seen by the microscope. Being phototropic, or light-loving, these make their way to the eye. Indians with affected eyes are almost blind in the sun, but see better at night.

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## PHYSIOLOGY

## Paprika Acid, Probably Vitamin C, Cures Scurvy

**A**N ACID prepared from paprika cured a man of scurvy when injected into his veins, it appears from a report by Dr. Poul Schultzer, resident physician of the Copenhagen Municipal Hospital, to *The Lancet*.

The acid is ascorbic acid. It was formerly known as hexuronic acid and is generally thought to be identical with vitamin C. This is probably the first time it has been used to cure the disease, which results from lack of vitamin C.

The acid was isolated from plants and from the adrenal gland cortex by Szent-Gyorgyi. He and other investigators in Europe and America have reported its

scurvy-preventing power in animals.

Dr. Schultzer's patient was a married man 68 years old, a former blacksmith who had been living for some time on a diet which was lacking in the scurvy-preventing vitamin C. He never took milk or any dishes prepared with milk and never ate any potatoes, vegetables or fruit. The man came to the hospital with typical symptoms of scurvy, which grew worse when he was kept on a diet known to be deficient in vitamin C.

Injections of ascorbic acid, prepared from the paprika plant by Szent-Gyorgyi resulted in rapid recovery.

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## BIOCHEMISTRY

## X-Rays Render Water Poisonous to Protozoa

**X**-RAYS played upon water or nutrient fluids make them deadly to protozoa by producing very small quantities of hydrogen peroxide. Experiments in which this fact was discovered are reported in *Physiological Zoology* by three Stanford University zoologists, Dr. C. V. Taylor, J. O. Thomas and M. G. Brown.

Experimenters first discovered that if they X-rayed a nutrient solution and then put in the species of protozoan they were using, *Colpidium campylum*, the animals died, despite the fact that the deadly rays never touched them. They found the same fate following their protozoa in X-rayed water.

They tested both the culture fluid and the water with titanium chloride, a compound extremely sensitive to the presence of hydrogen peroxide. The test indicated hydrogen peroxide in very small quantities—on the order of one part in a hundred thousand of water. The addition of one part of hydrogen peroxide to 450,000 parts of water rendered it toxic to the protozoa.

Then they tried the effect of X-rays on highly purified water from which all possible traces of dissolved oxygen had been removed. This water did not prove toxic to the protozoa. Water to which organic colloids, like sheep blood or agar, had been added was not rendered toxic by X-rays.

Recognizing that X-rays may also produce other toxic substances, the experimenters nevertheless regard the production of hydrogen peroxide by X-ray action as of considerable significance in the known deadliness of X-rays to protozoa and other types of cells.

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## PEDIATRICS

## Weather Affects Length of Time Children Sleep

**T**HE LENGTH of time children sleep is affected by the weather, naps being noticeably longer on rainy days, as any mother may have noticed. Scientific observations of how the weather affects children's sleep were made by Eunice Pierce, trained instructor at a preschool center of the Cleveland Child Health Association. The experiment was conducted in four nursery schools at Cleveland and extended over a period of six months.

Boys tend to sleep longer than girls, Miss Pierce found, but the length of time children sleep is variable.

Nap lengths drop tremendously on the first day of severe weather change, either hot or cold, but the sleep goes back to normal if the extreme cold or heat lasts for more than one day.

Other of Miss Pierce's conclusions, reported in the *American Journal of Public Health*, are that sleep falls off markedly before an illness and that the two and three-year-olds do not sleep longer as an average than the four and five-year olds.

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## BOTANY

## Florida Cacti Grow in Swamps

**C**ACTI that grow in swamps are the strange plants described and pictured by Dr. John K. Small, veteran student of Southern botany, in the *Journal of the New York Botanical Garden*.

Although most of us think of cacti as belonging to the desert Southwest, actually these curious jointed fleshy plants occur in many other parts of the country, and are especially abundant along the seashore. Some of the cactus species which Dr. Small has found in Florida grow perfectly contentedly in tidal salt marshes on both coasts of the peninsula, where the water and the soil are always saline. The same species grow in the middle of the peninsula where the soil is not salty at all and the water not excessive.

Other Florida cactus species studied by Dr. Small did not find the wet soil to their liking, and have taken to roosting on the limbs of trees, like orchids or Spanish moss.

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