

## CLIMATOLOGY

**Droughts Are Less Likely For The Next Few Years**

**D**ROUGHTS are less likely to afflict the United States during the coming several years than in the past half-decade, states the U. S. Weather Bureau's annual report.

This forecast is made on the basis of charts of weather for many years past, which indicate irregular ups and downs in the rainfall curve, and is based on the assumption that these fluctuations will continue.

Warning is issued, however, not to gamble on years of good rainfall continuing indefinitely. Farming and business enterprises that look to the long future will have to reckon with eventual return of droughts.

*Science News Letter, December 24, 1938*

## MEDICINE

**No Substitute For Insulin In Diabetes**

**S**OVEREIGN remedy for the treatment of diabetes is insulin, the chemical produced by a group of cells in the pancreas called the islands of Langerhans.

The dramatic story of the discovery of insulin and of the consequent rescue of thousands of patients from both death and a miserable starved existence that made death a welcome release has been told and retold.

Yet stories of insulin substitutes, which can be swallowed instead of injected hypodermically, keep cropping up and arousing hope that all diabetics can keep well without the bother of needle and syringe.

In view of these stories, and to emphasize the fact that so far insulin substitutes to be taken by mouth are only in the hoped-for stage, it might be well to summarize a discussion of the subject by Dr. Hans Jensen, of the Johns Hopkins University, in his recently published book, *Insulin* (Commonwealth Fund).

Dr. Jensen says that at present there is no substance which is non-poisonous and which can be given by mouth as a substitute for insulin in the treatment of diabetes. A number of substances, he points out, have been found which reduce the amount of sugar in the blood and which when given to patients with mild diabetes have caused a decrease in the sugar in the urine. Yet there are objections to each of them which have prevented their being universally accepted for treatment of diabetes.

The crucial test which an insulin substitute must pass, before being used for treating patients, Dr. Jensen says, is its ability to prevent symptoms of diabetes in animals from which the entire pancreas has been removed. Insulin itself does this.

These remarks on insulin substitutes do not refer to the new, so-called "slow action" insulins, which are prepared from insulin itself but altered so as to prolong the effect of the insulin.

*Science News Letter, December 24, 1938*

## ASTRONOMY

**Watch For Three Comets Which May Return in 1939**

**A**STRONOMERS will soon start the search for three comets which should return to the vicinity of the sun and earth early in 1939.

From the central telegraphic bureau of the International Astronomical Union in Copenhagen the U. S. Naval Observatory has received what astronomers call a search ephemeris—calculations listing the positions in the sky at various times at which the comets—if they do not return—should be sighted.

Such calculations have been received for comet 1925 II, a periodic comet known as Schwassmann-Wachmann. Also for comet Kopff (1906 IV) and comet Borrelly (1905 II). The notation for the Kopff comet means it was the fourth to pass perihelion in 1906 and the notation for the Borrelly comet indicates it was the second passing perihelion in 1905.

As comets swing far out into space from the region of the sky near the sun where they may be sighted by observers on earth, they may do either of two things. If they have elliptical orbits they are periodic comets and will again swing back and can be seen at some later time. If they have other types of orbits they simply go on out into space and are lost forever from the sight of telescopes on earth.

The periodic comets come back pretty much on schedules worked out by astronomical mathematics. But they rarely ever arrive exactly on schedule, for the paths calculated for them may be disturbed by the gravitational attraction of the major planets, particularly massive Jupiter. The shift is known as a perturbation of the comet orbit. For the Schwassmann-Wachmann comet the effects of perturbation caused by Saturn and Jupiter have been worked out, states the Copenhagen astronomical card which the U. S. Naval Observatory has just received.

*Science News Letter, December 24, 1938*

**IN SCIENCE**

## PUBLIC HEALTH

**10,000,000 Americans Suffer From Allergy**

**A**T LEAST 10,000,000 Americans suffer from some form of the now fashionable ailment known medically as an allergy, Dr. Theodore D. Beckwith, University of California professor of bacteriology, estimates.

Allergy is described in the statement as being a condition of hypersensitiveness to certain foods, drugs, animals, plants, climatic conditions and emotional disturbances. Hives, hayfever, asthma and sick headaches are among the ailments suffered by allergic persons when in contact with the particular offending substance.

*Science News Letter, December 24, 1938*

## ENTOMOLOGY

**Fewer Grasshoppers in 1939, Is Agriculture Forecast**

**G**RASSHOPPERS will not be as troublesome next year as they were during the past season, scientists of the U. S. Department of Agriculture predicted after completing their annual grasshopper-egg survey in the grain and range areas of the country.

Effectiveness of this year's poison-bait warfare against the pests is credited with reducing the egg crop by killing the possible parents before they reached the reproductive stage. A slow, cool spring, which caused last spring's 'hoppers to emerge in relays instead of nearly all at once, increased the difficulties of the anti-grasshopper campaign by necessitating repeated spreading of poison bait.

Another factor was the unwillingness of some farmers to distribute bait until they saw actual harm being done to their own crops, and the refusal of some farmers in the Northwest to attack grasshoppers on any land except their own, regardless of the fact that the insects do not respect property lines. Losses due to these causes are estimated at \$87,000,000 for the past season.

Despite the reduced grasshopper menace, the Department of Agriculture is preparing to distribute 206,242 tons of poison bait next year.

*Science News Letter, December 24, 1938*

# E FIELDS

## ENGINEERING

### Urge Care in Wiring For Christmas Lights

See Front Cover

**T**HE baby playing so happily under her first Christmas tree, as shown on the front cover of this week's SCIENCE NEWS LETTER, has lightning in her hands.

All the Christmas tree hazards were not abolished when lighted candles went into disuse. Engineers of the Underwriters' Laboratories, Inc., warn in this picture that you should be careful of all electric wiring. Don't let the baby play with frayed cords like the one shown. Be sure they are in good condition and approved by safety engineers.

*Science News Letter, December 24, 1938*

## ARCHAEOLOGY

### Who Ate the First Oyster Is a Prehistoric Mystery

**S**CIENTISTS are still on the trail of that lost hero: the man who ate the first oyster.

It was Dean Swift who called attention to this adventurer in the pithy remark, "He was a bold man that first eat an oyster." But Dean Swift, with his eighteenth century grammar and his eighteenth century knowledge of prehistoric man, could never have suspected how far back in time his light quip would be pursued, in search of the missing pioneer.

Prehistorians in their studies of man's rise to civilization have trailed the oyster-eating custom back through the Neolithic, or New Stone, Age. They find great mounds of shells at Neolithic settlements to prove that oyster eating was an old story then. They have also found evidence that mankind ate oysters in the preceding period called the Mesolithic, or Middle Stone, Age. That establishes the oyster as human food no less than 15,000 years ago.

But what about the Old Stone Age before that? Somewhere in those thousands of years of slow pioneering, the great oyster experiment took place. Unfortunately, Old Stone Age sites are not numerous, and those known are chiefly inland.

Discoveries may reveal earlier and earlier oyster eaters. But the first-man-to-eat-an-oyster will have to be pursued all the way back to the early days of wild mankind, if the theory of Prof. Thomas Cherry is correct. He once advanced the idea that early man left the forest and his ape friends for the seashore, and lived there for some time. Shellfish were abundant and filling and easy to catch. Monkeys have been known to eat oysters at the shore, so it would require no great wit to open the shells.

So—if Prof. Cherry is right, and if the early seafood eaters happened to be in an oyster neighborhood, why, then, the bold attack on an oyster may have happened almost a million years ago.

*Science News Letter, December 24, 1938*

## FORESTRY

### Shelterbelt Plantings Succeeding Despite Drought

**S**HELTERBELT plantings in the Great Plains area are succeeding, despite a succession of drought years, Glen R. Durrell, state forester of Oklahoma, reported to the Society of American Foresters.

Surveys of each year's plantings have shown survival rates of 77 per cent. in 1935, 51 per cent. in 1936, the worst of the drought years, and 70 per cent. in 1937. Figures for 1938 are not yet final, but a survival of about 70 per cent. is expected. All four of these years have been classed as drought years on the Plains.

"In the belts planted in Oklahoma in 1935, many of the trees of the faster growing species are now 20 to 25 feet tall, with plantations of the succeeding years doing proportionately well," said Mr. Durrell. "Compared with the success obtained in private plantings in years past, it is readily seen that the secret of success lies in the fact that the job is being handled by trained foresters utilizing all of the knowledge that has been gained through forestry research in the region."

The plantings are usually set out ten rows wide, with eight to ten feet between rows, and six to eight feet between trees in a row. A shrub row is usually planted on the windward side of the belt to close up the understory, and from there on the trees are so arranged that shorter species are to the windward of taller ones, thus presenting a "streamlined" front to the prevailing winds, shooting them up into the air as they strike.

*Science News Letter, December 24, 1938*

## ORNITHOLOGY—PALEONTOLOGY

### Ice Age Egg Reported By Smithsonian Scientist

**A** FRAGILE eggshell that has survived upwards of a million years of time's mischances since Ice Age days was introduced to the American Ornithological Union at its meeting in Washington, D. C., by Dr. Alexander Wetmore, of the Smithsonian Institution.

The shell was found embedded in a bed of soft stone near Lovelock, Nev., by Ott F. Heizer, who sent it to the state University. It was in turn forwarded to the U. S. National Museum by Prof. Harry E. Wheeler of the Mackay School of Mines.

The ancient relic has been partly freed from its stony matrix by Dr. Wetmore, who said that as near as he can tell, it is the egg of a cormorant. That a sea-bird's egg should be found in country that is now predominantly desert appears less strange because the site of its discovery was one of the shore terraces left by the vanished prehistoric Lake Lahontan, which during the Ice Age covered a large part of Nevada.

*Science News Letter, December 24, 1938*

## CONSERVATION

### Farm Saves Rare Species Of Quail From Extinction

**H**OW immigrant game birds are being used to save rare native quail and other species from extinction was related by Vernon Bailey, veteran Washington naturalist.

During the past summer, Mr. Bailey reported, he visited the game farm conducted by Mr. and Mrs. J. Stokeley Ligon near Carlsbad, N. M. The Ligans raise thousands of ringneck pheasants and Chukar partridges, which are imported species from the Old World, which they sell to state game commissioners and private shooting clubs.

Their real interest, however, is in rare native game bird species that are threatened with extinction. On these they spend the profits they make from their wholesale raising of exotic game. Among the native birds they are successfully raising are all species of bobwhite quail, prairie chicken and western wild turkey. One species, the masked quail, has for some time been extinct in the United States, and breeding stock had to be obtained in Mexico.

As yet, very few of the native birds have been distributed. Eventually, they expect to dispose of breeding pairs.

*Science News Letter, December 24, 1938*