

METEOROLOGY

**Colder in North;
Warmer in South**

► OLD Man Winter started out by dealing out for the period Nov. 15 to Dec. 15 warmer than normal weather where we do not need it and weather that is colder than normal where it certainly is not welcome.

The Extended Forecast Section of the U. S. Weather Bureau predicts that, until Dec. 15, temperatures will average above normal in most of the southern and western parts of the country, with California set to be most above normal. On the other hand, the northern Great Lakes region will be suffering under colder than normal weather for this period.

The rest of the nation—a broad band from the Pacific to the Atlantic excluding the regions mentioned above—will experience about average temperatures until Dec. 15.

More snow and rain than normal is predicted for the northern border states and also in Oregon and northern California. This continues a pattern first predicted earlier. But the southern plains, the southwest and Florida can expect less precipitation than they usually receive. The rest of the nation will get about the same amount of snow and rain as usual.

Science News Letter, December 2, 1950

ICHOLOGY

**Tell Ancient Reptiles
By Footprints**

► ICHNOLOGISTS, the footprint detectives of science, are using rubber feet built from fossils to answer their usual question, "Where were you, you reptile, 250,000,000 years ago?"

The answer, of course, is "Crawling through this here mud-hole." But scientists want to know much more: what sort of creature left the fossil footprints they dig up, how broad was it between the shoulders, did it travel with a gallop or a shuffle?

To answer such questions as these, Dr. Donald Baird of the University of Cincinnati Museum told the Geological Society of America in Washington, ichnologists now can rebuild an ancient foot in rubber merely from its print preserved in rock. From the foot, oftentimes the animal can be reconstructed.

Latex moldings are taken from footprints laid down in the dim geologic age when coal was being formed. They are proving valuable clues to the animal life of prehistoric America, Dr. Baird said.

Many different kinds of primitive amphibians and reptiles crawled through swamps and mud-flats. Although their bones may have vanished, often their footprints remain, preserved in sedimentary rocks.

From a well-preserved track, scientists can deduce a great deal about the animal, his body proportions, weight and size. In some cases, Dr. Baird said, the footprints are the only clue to some bizarre reptile which long ago vanished from the earth.

Science News Letter, December 2, 1950

PHYSIOLOGY

**Iron in Blood
Changes During Day**

► THE AMOUNT of iron in your blood plasma normally undergoes a regular day and night variation, falling from a high point in the morning to a low one in the evening, scientists at the University of Utah College of Medicine have found.

The mean level of iron in blood plasma was about 66% at 5 p.m. and had risen to about 148% at 9 a.m., the scientists found in tests made on seven healthy men. Samples of a couple of teaspoons of blood were taken from these men at intervals of two to four hours throughout the 24 hours. The same sampling and testing was done on another 12 healthy men, starting at 9 a.m. The results were approximately the same, showing that the change through the day was not due to the bleeding.

The daily rhythm of blood plasma iron is apparently related to activity and sleep. Two Scandinavian scientists found that it is shifted in night workers, with the plasma iron levels highest in the afternoon or evening after waking and the lowest in the morning at the end of the night shift of work.

In a group of five normal persons who were leading irregular hours of activity and sleep, there was no definite diurnal cycle, the Utah scientists found.

So far, they do not know of any explanation for this variation in blood plasma iron level.

Details of the study, by Drs. L. D. Hamilton, C. J. Gubler, G. E. Cartwright and M. M. Wintrobe, are reported in the PROCEEDINGS OF THE SOCIETY FOR EXPERIMENTAL BIOLOGY AND MEDICINE. (October)

Science News Letter, December 2, 1950

PLANT PATHOLOGY

**Japanese Pest Turning
Evergreens Yellow**

► NEW YORK commuters whose evergreen landscaping has been hit by a sickly yellow scourge are victims of a new U. S. plant pest.

A black, lacy-winged bug from Japan has popped up mysteriously in Westchester County and southwestern Connecticut, Dr. Stanley W. Bromley of the Bartlett Tree Research Laboratories reported.

The lace bug was identified as Japanese by Dr. Norman Bailey of Boston University. But how it got here is a mystery.

Science News Letter, December 2, 1950

IN SCIENCE

AERONAUTICS

**Pest-Control Aircraft
Will Be Needed**

► MORE planes will be needed next year to help farmers produce bigger crops, it was indicated by officials of the U. S. Civil Aeronautics Administration. Their great use is in pest control.

Aviators play an important part in modern farming by spreading pest-killing dusts and sprays from the air on many of the major crops and on forest trees. They also distribute seed and fertilizer to rice fields and burned-over areas following forest fires. Some 5,000 airplanes and helicopters are now used for these purposes.

More aircraft to aid farming will be needed next year because of increased acreages which will follow the action of the government in removing production controls on all crops except peanuts and tobacco. With the growing use of chemicals to kill weeds, more use of planes in weed-killing is expected. In addition to weed-killing chemicals, others are now coming into use to destroy woody plants such as scrub trees on pasture land.

Science News Letter, December 2, 1950

GEOLOGY

**Dry Texas Was Once
Green with Forests**

► A SEA once covered the now dry desert of West Texas and a mountain range once extended across the mouth of the Gulf of St. Lawrence.

This ancient geography was reported in Washington to the Geological Society of America meeting.

Dr. C. C. Albritton of Southern Methodist University told how, during the period between a drought a hundred million years ago and the present dry spell, the sagebrush country around El Paso was green with forests and even flooded by the sea. He made his discovery on long-ago climates while mapping along the Mexican border for the U. S. Geological Survey.

From studies of the rocks and fossils of Cape Breton Island, Nova Scotia, Dr. R. D. Hutchinson of the Geological Survey of Canada drew his conclusion that a mountain range once stood across the mouth of the Gulf of St. Lawrence. This long, narrow range of low mountains was separated by two seas, one of which extended in a southwestward direction along what are now the mountains of western New England.

Science News Letter, December 2, 1950

CE FIELDS

VETERINARY MEDICINE

Too Much Excitement Can Blind Your Dog

► YOUR dog can go blind from too much excitement, a veterinarian of Colorado A. & M. College has reported.

A serious eye disease known as glaucoma can be caused by emotional upsets in dogs, Dr. R. H. Jourdan writes. (JOURNAL OF THE AMERICAN VETERINARY MEDICAL ASSOCIATION.)

The ailment builds up fluids in the eye, hardening the eyeball and sometimes causing blindness. Dr. Jourdan has found that this condition is much more common in highly excitable dogs. It may be brought on, he says, by no more than "a very exciting weekend."

Enforced rest may forestall the disease. But dogs that cannot take it easy may work themselves into such a nervous condition that glaucoma results, the veterinarian found.

Science News Letter, December 2, 1950

ENGINEERING

Pitting Chief Hazard To Steel Ship Hulls

► THE FORMATION of pits in steel in sea water, not general corrosion of the entire hull of a steel vessel, is an important problem to ship operators. The rate at which steel under sea water wastes away over its entire surface is low. Pitting, however, may cause serious trouble in a relatively short period.

If it were not for this pitting tendency of steel, it would be hardly necessary to paint and protect the underwater body of a ship, the Society of Naval Architects and Marine Engineers was told by Paul Ffield, of the Bethlehem Steel Company, Quincy, Mass. The average rate at which the steel is rusted away over its entire surface is less than an eighth of an inch in 20 years, he said.

Pitting is a natural tendency of steel, and the rate of attack at the pits is five to ten times greater than the general corrosion attack over the entire exposed surface, he stated. The problem of controlling corrosion of the underwater body is largely one of preventing the occurrence of pitting. Regular painting is the usual control.

Paints generally are not completely impervious to sea water under a hydrostatic head, he added, but even if water does get through serious trouble will not occur if the pitting tendency of the steel is mild. Of real concern to ship operators and builders are the more vigorous causes of pitting.

These include physical conditions which

may break down the paint and expose the steel, or an electrochemical effect so powerful that the paint film can not hold it in check.

Pitting corrosion may be due to stray electric currents generated on shore and led to the ship in the water, or to welding during outfitting which may be a source of stray currents. Pitting may also be due to galvanic currents resulting from dissimilar metals in the hull. The control of galvanic corrosion involves avoiding the use of dissimilar metals whenever possible.

Science News Letter, December 2, 1950

PUBLIC HEALTH

Fat People Have More Falls

► FAT PEOPLE have more falls and other accidents than persons of normal weight, Northwestern National Life Insurance Company finds. The company's Family Economics Bureau says that's one more reason for fat people to go easy on Holiday dinners.

"Fat is one of our greatest killers," the F. E. Bureau warns.

Fat kills in two ways: by promoting disease and by making various diseases more deadly. Examples, besides more frequent falls: More heart disease, more kidney trouble, more diabetes, far more cancer and three times as much high blood pressure among overweight people as among people of normal size.

Science News Letter, December 2, 1950

GEOLOGY

Erosion May Be Cause Of Submarine Canyons

► NEW evidence for the cause of submarine canyons—those deep-cut valleys in the ocean floor along the continental shelf—was offered by Dr. John C. Crowell, assistant professor of geology at the University of California at Los Angeles.

Speaking before the Geological Society of America meeting in Washington, he said that erosion processes operating below the surface of the sea are responsible.

Previously it had been held that the sea floor in ages past had been raised high enough to be dry land and had then been cut by rivers or glaciers. Later the land had sunk and had been covered by the sea.

Dr. Crowell has investigated several of the largest submarine canyons off the California coast. He has evidence, he thinks, to show that some of these canyons were formed in recent geological times.

"The canyons were probably eroded by the grinding action of sand and silt sliding down relatively steep submarine slopes," he said. "Some were probably eroded during the Ice Age when the sea level stood lower than today, but these too, I believe, were cut by similar submarine processes."

Science News Letter, December 2, 1950

BOTANY

Treated Onions Do Not Sprout During Storage

► A WAY to keep onions from sprouting during storage has been discovered by S. H. Wittwer and R. C. Sharma of Michigan State College.

The method consists in spraying the tops of the plants, while they are still growing, with a chemical called maleic hydrazide. When the plants were sprayed with a 2,500 parts-per-million solution of this chemical about two weeks before harvest, the onions did not sprout during five months in storage and there was considerably less loss from storage breakdown.

Flavor, color and odor apparently were not affected, the scientists state (SCIENCE, Nov. 17).

Similar results have been obtained with carrots and the method is now being tried on other commonly stored root crops such as sugar beets and potatoes.

Science News Letter, December 2, 1950

AERONAUTICS

England Building Five Different Helicopters

► FIVE different types of helicopters are being built in England, the latest being a British version of a 12-seater American craft. One purpose for which helicopters will be used is to serve cities too close together to be easily served by ordinary airplanes.

Britain, of course, is developing helicopters for the armed forces but has an unusual interest in the civil field. It pioneered the development of the helicopter as a passenger-carrying machine, and is at present operating the world's first scheduled passenger helicopter service with flights between Cardiff and Liverpool.

The country is geographically suited to a machine which can operate economically over short ranges, can fly at low speeds and land in nearby areas little larger than the machine itself.

Britain is building three large helicopters of different types and two small helicopters. In addition to the craft of American design, under construction is the Bristol 173, also a 12-seater. The Cierva Air Horse, now nearly ready for testing after an earlier failure test, is designed to carry 25 passengers and is one of the world's largest helicopters.

The Bristol 171 is a small helicopter of British design. The other British-built small helicopter is the American Sikorsky, which is called the Dragonfly in England. It has made a passenger-carrying flight across the English Channel and also has been used in city-to-city service between the centers of London and Birmingham.

Science News Letter, December 2, 1950