BOTANY

War Threatens Existence Of Botanical Journal

WAR threatens the existence of the well-known and widely used international botanical journal, *Chronica Botanica,* published in Leiden, the Netherlands. Prof. Robert F. Griggs of George Washington University, has received a letter from its editor and publisher, Dr. Frans Verdoorn, in which the war-imposed necessity for suspending publication is announced.

Countries now at war have been the sources not only of the financial support of *Chronica Botanica* but of the scientific articles which have filled its pages. Both financial and scientific contributions have fallen away almost to nothing. In the face of a probably long war, Dr. Verdoorn feels that all he can do is finish the current volume and then shut up shop.

Only one possible way out suggests itself. Since Dr. Verdoorn and his wife have no source of income other than their journal, he now has to have a job. He is willing to come to the United States and continue publishing in this country, if he can find a position. He feels that even if this country should later be drawn into the war, scientific publication will not be affected here as it has been in Europe.

If nothing materializes along this line in America, Dr. and Mrs. Verdoorn intend to go to Java, where he has been offered a post desirable in every respect save that the publication of an international science journal can hardly be carried on in so remote a part of the world.

Science News Letter, November 18, 1939

BOTANY

Spanish Plant Collection Becomes Orphan of War

A BOTANICAL orphan of two wars is now in the United States, and no one knows what its ultimate fate will be.

It is the great Sesse-Mocino collection of plant specimens, gathered in Mexico in the late eighteenth century by the two Spanish botanists whose names it bears, under command of the King of Spain.

After Senors Sesse and Mocino had taken their botanical booty back home, the thousands upon thousands of sheets of pressed specimens lay bundled up and neglected, on the shelves of the Botanical Garden of Madrid. In 1887 a description of the plants was published, but it was scientifically out of date even when it appeared. And for nearly another half-century the collection was neglected.

Came Spain's revolution, and a new and more energetic curator to the Madrid Botanical Garden. He decided to send the whole collection to the United States, to get its nomenclature brought up to date and the whole business straightened out. Then, of course, it was to be sent back home.

The Field Museum in Chicago was chosen as central headquarters. Parts of the great collection were shipped to various American botanists, specialists in the identification of particular plant groups. They were to report, and return the specimens.

Then came Franco's successful insurrection, overthrowing the Spanish republic, and on the heels of that comes the present war.

The Sesse-Mocino collection is still here, work on it is still proceeding in a score or more of American botanical workshops, and nobody knows for certain what is to become of it.

The problem, of course, may solve itself. A task of this kind takes years to accomplish, so that by the time the last American botanist has determined "a local habitation and a name" for the last puzzling specimen, the last shots in Europe may have been fired, and the Continent may again be a safe place for harmless, peaceful, valuable pressed plants.

Science News Letter, November 18, 1939

ENTOMOLOGY

Bacteria Cause Change In Color of Insects' Eyes

BACTERIA have been shown to be able to change the eye color in Drosophila, or fruit flies, in experiments reported by Dr. Edward L. Tatum of Stanford University, who has been working on a project financed by the Rockefeller Foundation. Such changes have hitherto been considered to be a monopoly of genes, or hereditary units within the cells of the insects themselves.

The change, from white to brown color in the eyes, is brought about by a hormone produced by the bacteria, working in conjunction with tryptophane, an amino acid which is part of the flies' diet. The bacteria-produced hormone seems to be identical with a hormone produced by the flies, under certain conditions.

Dr. Tatum made his discovery when the tryptophane used in feeding his fruit flies became contaminated with a still-unnamed species of bacterium.

Science News Letter, November 18, 1939

IN SCIENC

ARCHAEOLOGY

Pine Trees Promise Means Of Dating New England Past

PROSPECT that New England pine trees may "talk," revealing dates in New England's aboriginal prehistory, is seen as a result of a test of the tree ring method of dating old and buried timber, reported by Prof. Charles J. Lyon of Dartmouth College. (*Science,* Nov. 3.)

Dr. Lyon has determined that buried timber at the abutment of an old bridge near Wolfeboro, N. H., was cut about the year 1806. He dated the white pine logs by studying annual growth rings in cross-sections of the wood, and by matching the outer rings with inner rings of other white pines that were felled not far distant by the hurricane in September, 1938.

A calendar of Arizona pine trees formed by this method has enabled archaeologists to set dates on prehistoric Indian pueblos and cliff dwellings in the Southwest, and archaeologists have hopes of constructing similar tree ring calendars for other sections of the country, using certain trees which may keep a sufficiently distinctive record.

Science News Letter, November 18, 1939

ECONOMICS

Germany Said to Face Peril Of Defeat by Scarcity

IN a frankly anti-Hitler book, *From Nazi Sources: Why Hitler Can't Win* (Alliance), here is the verdict on food and raw materials in Germany: If Germany is left to her own resources, famine will overtake her sooner than in the last war. Today, as in 1914, Germany is facing the peril of being defeated by hunger despite her possible military successes on the battlefields. It is quite out of the question that the Reich could ever make herself independent of imports in wartime. At no time will it be possible for Germany to produce sufficient oil in her own territory to satisfy her wartime needs. Ersatz production increases production costs and reduces the size of the army available while it fails to diminish Germany's dependence on foreign imports.

Science News Letter, November 18, 1939

E FIELDS

CHEMISTRY

Milkweed May Find Use As Meat Tenderizer

MAKING tough meat tender is the job that promises employment for one of America's unemployed plants, milkweed. Botanists and biochemists at the University of California have discovered in its juice an active substance that can tenderize meat as successfully as can papain, extracted from the tropical plant, papaya, now used on a large scale for the purpose.

The quantity of the new-found substance in milkweed juice is small, but it is believed that large-scale and intensive cultivation of the plant might make its production profitable. At present, papaya imports amount to half a million pounds a year, costing several million dollars.

The active principle of the milkweed has been named asclepain, from the botanical name of the plant, *Asclepias,* by analogy with the formation of the word papain from the plant name *Papaya.*

Interstate shipment of meat that has been treated with papain and other medically active substances is not permitted by Federal authorities. Not that papain is harmful, it was explained to Science Service in Washington; but it is held best policy for the consumer, acting either under the advice of his physician or on his own initiative, to administer such treatment himself if he so chooses.

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ARCHAEOLOGY

Egyptian Tomb Preserves Remarks of Men at Work

YOU CAN hardly imagine a modern mausoleum decorated with scenes of traffic and butcher shops, with remarks by the people in the pictures written alongside, as captions. Remarks such as "Keep going!" and "Give a hand, there."

But this sort of art was familiar to ancient Egypt. A vivid example, exhibited in Philadelphia, is on a government official's tomb, which archaeologists brought all the way from Sakkara in Egypt to be set up in the University Museum of the University of Pennsylvania.

An archaeologist at the museum has got around to translating conversation recorded on this tomb. It gives you a good sample of the orders and chat of men at work, 2500 B.C.

Along the tomb's entrance passage, the walls are sculptured with low-relief scenes of ships and rowboats. In such transportation the soul of Kaipure, the tomb owner, expected to journey to the other world. Efficiency of the crews is assured by brisk commands inscribed in columns of hieroglyphs.

The captain calls: "Give attention to the rope! The wind is behind thee again!" and "To the west, to land in the middle!"

These are warnings to the man on the cabin roof who turns the spar of the sail to catch the wind.

The captain also urges the rowers: "Work hard! The wind—"

Kaipure was a government official in the treasury, a sort of chief clerk or assistant secretary. His tomb chamber is sculptured all over with processions of servants laden with food and other supplies that he wanted brought to his tomb.

Conversation in the butcher shop scenes has been interpreted. Says one butcher, wielding a large knife on a carcass: "Take hold!" And the assistant replies in what may be an ancient equivalent of OK, "I will do it so that you will approve it."

Other workers call out similar efficient orders and get willing response in this shadowy tomb world.

"Such inscriptions bring us nearer to the real life of the Egyptians," says the archaeologist. "It is a pity that only a comparatively few have been left to us."

Science News Letter, November 18, 1939

PHYSIOLOGY

Mobilizer For Body's Germ-Fighters Discovered

AN AS yet unidentified substance which acts as mobilizer of the white blood cells, sometimes called the body's germ-fighters, has been discovered in the exudate that accompanies inflammations. The substance apparently acts primarily on the bone marrow, causing white blood cells of a certain type to pour out into the blood stream, Dr. Valy Menkin, of Harvard Medical School, says in reporting his discovery. (*Science,* Sept. 8)

Science News Letter, November 18, 1939

ASTRONOMY

Twelve Comets Found Already This Year

THE DISCOVERY of a new and unexpected 12th magnitude comet on Nov. 1 by Clarence L. Friend, of Escondido, Calif., brings to 12 the number of comets which so far have been sighted by astronomers during 1939.

Seven of these comets have been of the periodic type which return to the region of the sun and earth at regular intervals which astronomers can calculate accurately. As might be expected, professional astronomers working in large observatories rediscovered all these returning comets.

Of the five new and unexpected comets found so far this year, two have been spotted by amateur astronomers alone, two jointly by an amateur and a professional and only one by a professional astronomer alone.

Significant mark of the new Friend comet is its rapid motion. From its originally discovered position in the "keystone" of Hercules near right ascension 16 hours, 52.9 minutes and declination plus 34 degrees, three minutes, it moved rapidly east and south.

Science News Letter, November 18, 1939

ENGINEERING

Byrd Expedition Takes Non-Frosting Window Panes

SIXTEEN panes of non-frosting glass windows will go aboard the *North Star* of Admiral Byrd's U. S. Antarctic Expedition when it stops at Philadelphia on its way to the South Seas and to the great frozen Antarctic continent.

The new windows consist of layers of heat tempered glass with the space between them filled with dehydrated air. With no moisture within to condense and freeze, the panes will supply good light for the new laboratories to be established by the expedition. Being heat tempered, the panes have added strength which will allow the scientists to walk on them, if necessary, and shovel off snow.

Each pane is three feet long and one foot, nine inches wide. They will form skylights in the roofs of the prefabricated laboratories now in the hold of the *North Star.*

Called Thermopane by its makers, the Libbey-Owens-Ford Glass Company, the commercial use of the new type non-frosting windows will be in display refrigerators in meat and other markets.

Science News Letter, November 18, 1939