GENERAL SCIENCE

Leading Science Journals Pledge Aid to Europe's War

Die Umschau and Nature Both Offer Support of Men Of Science to Service of Their Respective Causes

COMPLETE absorption of British scientific men in the task of winning the war is pledged in the leading editorial in the first post-outbreak issue of *Nature,* (Sept. 9) most widely circulated of British science journals.

"For the moment, the interests of pure science as an intellectual pursuit and discipline must remain in abeyance," the statement declares.

Blame for the war is fixed on "the cynical disregard of Germany for the rights of small nations," and it is asserted that the British people have accepted the challenge reluctantly, but with a grim determination that the cause which it holds just shall prevail.

The editorial, however, looks forward to a post-war world in which renewed efforts must be made to reconstruct a society of nations on a basis of justice and equity. No attempt is made to forecast the form which the new international cooperation will take, but the task is recognized as one that definitely must be undertaken.

The article says, in part:

"In no previous war has science played so great a part as that which will be demanded of it in the struggle that is at hand. For a time, while the issue hangs in the balance, it is the duty of the man of science to lay aside his just misgivings whether the greatest force of the human intellect should thus be harnessed to the forces of destruction. For the moment, the interests of pure science as an intellectual pursuit and discipline must remain in abeyance. The energies, the abilities, and the knowledge of each and every individual with scientific training must be directed without remission to the service of the Allied cause.

"Nevertheless, the end to be attained, and the end which science should hold ceaselessly before the eyes of the Allied peoples, is not destruction, but a constructive ideal—to ensure in the future such conditions as will make possible the advancement of all the peoples of the world without discrimination, according to the status and the traditions of each, in the light shed by (*Turn to page 222*)

THE WIDELY read German science weekly, *Die Umschau,* (Sept. 10) in its first issue dated after the declaration of war, declares that Germany's accomplishments under the Four Year Plan justify a demand for "Lebensraum" and formally pledges that German science and technology will support the Fuehrer "to the utmost."

The main text of the magazine, evidently edited before the outbreak of hostilities, has no mention of the war. But a supplementary leaflet inserted reads in translation as follows:

"The Fuehrer demonstrated, in his great speech before the Reichstag on September 1, that Germany must fight to protect the vital rights of the nation.

"Under the leadership of Adolf Hitler, the German people have worked for six years on their own reconstruction. Like the German workingman, the German scientist pledged himself to do his part toward the strengthening of the people. Here also the Fuehrer showed the way. The technical accomplishments—his edifices, his highways—stand before the eyes of all. Less evident, but not less important, are the fruits of German science, that first made it possible to solve the great problems of the Four Year Plan. The provision of raw materials was vastly increased — the erection of industry could go forward on a broad foundation. Innumerable new industrial materials were brought into being, and the social, hygienic and racial measures were carried through to the greatest extent.

"A people, that under its Fuehrer could carry out such mightly works in so short a time, has through that alone justified its existence and established its claim to living space (Lebensraum). No power in the world can restrain us from defending these rights to the utmost. With faith in our Fuehrer the whole German people will battle to the fullfilment of these demands. Like every other class, German science and technology will venture every pledge."

Science News Letter, September 30, 1939

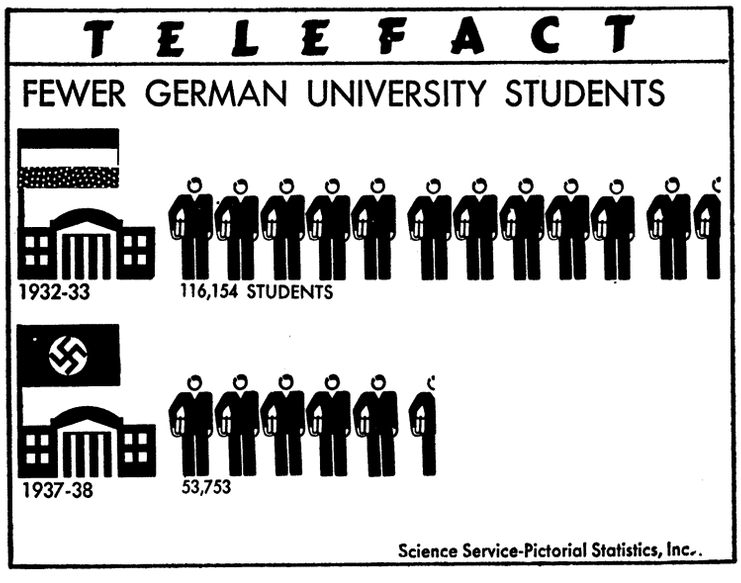
PHYSICS

Air In Stratosphere Is Hot Enough To Boil Water

AT 38 miles above the earth's surface the temperature is 100 degrees Centigrade, the boiling point of water, Dr. Fred L. Whipple, Harvard astronomer, told the meeting of the International Union of Geodesy and Geophysics in Washington, D. C.

Dr. Whipple's discovery was accomplished with a new type of "meteor speedometer" which uses the appearance of shooting star tracks in the sky to tell temperatures in the stratosphere far beyond the reach of man.

With his new apparatus Dr. Whipple obtains very accurate measurements of the height, brightness, velocity and de-



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us, Freud attempted it by exploring the internal world of man himself. In the present confused world man is using his advanced technical knowledge both for self-preservation and destruction. Freud's psychoanalysis, by its deeper knowledge of man's destructive impulses, may be the antidote against one sided technical development which threatens to destroy civilization. It may lead to a more constructive social life in which man, by recognizing it, will control his unconscious destructiveness and use his scientific mastery of nature for mutual help to happiness.

Science News Letter, September 30, 1939

ENGINEERING

Bureau of Standards Has Completed Steam Tables

IMPORTANT jobs you never hear about: Making up long tables of fine print listing thousands of figures, the steam tables familiar in engineer's handbooks based on a long and complex series of determinations of the properties of steam. U. S. Bureau of Standards research just completed covers properties of water and saturated steam from water's freezing point (32°F.) to the critical region where pressure is about 3200 pounds per square inch (705°F.)

What steel strength data is to the bridge builder, steam tables are to engineers who build giant power plants and locomotives. International cooperation, U. S., England, Germany participating, made possible the research, successfully steered by the American Society of Mechanical Engineers.

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reason and scientific knowledge. To keep alive the aims of science in furthering the pursuit of truth in the universe and the relation of that truth to the developments of man's nature, without regard to tribal and racial distinctions, should be, indeed, must be, the ultimate function of the scientific thinker, whatever may be his more immediate preoccupations."

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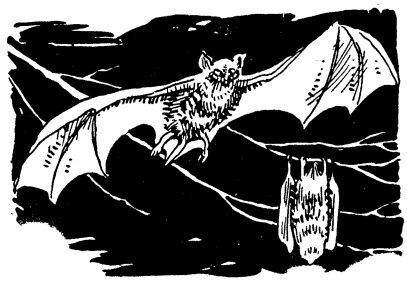
●RADIO

H. S. Fairbank, of the Public Roads Administration, will be the guest scientist on "Adventures in Science" with Watson Davis, director of Science Service, over the coast to coast network of the Columbia Broadcasting System, Monday, October 9, 4:30 p.m., EST, 3:30 CST, 2:30 MST, 1:30 PST. Listen in on your local station. Listen in each Monday.

ZOOLOGY

NATURE RAMBLINGS by Frank Thone



Bats as Pets

BATS would seem to be about the world's worst bet as possible pets, yet they have been tamed at least to the extent of willingly accepting food from human fingers, reports Dr. Glover Morrill Allen, curator of mammals in the Harvard University museum of comparative zoology, in a new book on bats. (*S.N.L.*, Sept. 23.)

The way to a bat's heart, no less than to a man's, lies over that well-worn threshhold, the stomach. Bats are voracious creatures, always hungry, as small and highly active animals usually are. They will struggle and try to bite when first made captive, but if you poke a choice insect tidbit between their gnashing teeth they apparently forget their hostility very quickly. Dr. Allen even tells of one which he pacified by giving drops of water on the end of a lead-pencil while he held the little mammal in his other hand.

Bats are apparently ready for any kind of insect food, even unfamiliar sorts; for after inducing his newly captured pet to slake its thirst, Dr. Allen presented it with a gift of mealworms purchased at a bird store. It is highly unlikely that bats ever encounter mealworms in the course of their ordinary nocturnal hunting; nevertheless this bat evidently liked the taste of the first one offered:

"His jaws closed in a viselike grip, his sharp canines puncturing the plump body of the mealworm as if it were a 'hot-dog'. His whole attitude was one of fierce resistance, with every intent to vent his fury on whatever disturbed his peace. Then, suddenly, as the tasty juice oozed into his mouth, his entire behavior changed. The tense jaw muscles relaxed, his defiant squeaks ceased, and I could sense the working of his mind as his wrath abated and he began to taste the squirming morsel with rising interest.

"In a few seconds all recollection of his situation seemed to have vanished, while the unfortunate mealworm, chewed over from end to end, was promptly swallowed, and my captive looked up hopefully for more. One after another he chewed down two dozen mealworms, and by now we had established friendly relations."

It is a good thing that bats can be thus quickly tamed, for it never pays to keep them more than a few days in captivity. They are obviously not fitted for a "cage-bird" existence, and will die if kept in too close confinement. Dr. Allen does tell, however, of several instances in which bats come to regard human beings as dependable sources of provender, and would report regularly at mealtimes.

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VOLCANOLOGY

"Baby" Volcano Nestles At Its Mother's Feet

See Front Cover

A "BABY" volcano which nestles at its mother's feet in Guatemala may become the scene of operations of a new expedition in volcanology to be sent out by Carnegie Institution of Washington early in December.

Towering Santa Maria is the parent volcano and little Santiaguito is the baby. Both are shown on the front cover of this week's SCIENCE NEWS LETTER. The diminutive is used only in a relative sense for Santiaguito rises 1,200 feet off the floor of Santa Maria's old crater which formed in the gigantic eruption of 1902 at the same time that Mt. Pelee was bringing havoc by its eruption in Martinique.

Carnegie Institution scientists, headed by Dr. E. G. Zies, of the Geophysical Laboratory, will study the rock masses slowly being extruded from Santiaguito and analyze the corrosive gases of sulfur dioxide, hydrofluoric acid and sulfuric acid which are found mixed with the steam being liberated.

The new volcano dome has risen rapidly, for it began to form in 1922. It was nearly 1,000 feet high within three years and has been pouring out nearly a constant volume of semi-plastic heated rock ever since. Because its base is constantly growing larger, its increase in height becomes slower each year.

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