

THE NATION is engaged in warfare, a struggle against the disruptive forces let loose during peace times, an economic battle with poverty in the midst of plenty. It is a war being fought on behalf of the nation by the "new deal."

There is great apprehension in Washington in Uncle Sam's Scientific establishments. The word is being passed along that the ammunition is failing.

Less than a cent of every dollar spent by Uncle Sam in normal years is used in the fruitful battle waged by scientific research. Scientific research activities cost only \$42,000,000 in that peak year of 1932. The appropriations of the last pre-Roose-

velt Congress intended to be used for research in the year beginning July 1 were some \$35,000,000.

But economy is the slogan and the axe of Budget Bureau Director Lewis Douglas is falling heavily. It appears that about \$10,000,000 of the already reduced scientific research funds have been lopped off under President Roosevelt's economy act power conferred by Congress.

To support all the scientific research activities of the Federal departments, which solid figures show return thousands of per cent. profit in public service, only about \$25,000,000 will be available, a reduction of over 30 per cent. from the 1932 funds. Hundreds of researches

will be stopped, hundreds of scientists have been dismissed or have had their already nominal compensation reduced to dangerously low levels. Spirits are being broken, a condition that is even more dangerous than empty stomachs.

Science suffers. For the insects that menace our food supply, for the diseases that threaten our lives, for the industrial gods of waste and ignorance who shiver when scientists investigate, it is a noble victory.

For the next generation, it is dangerous defeat.

The SCIENCE NEWS LETTER presents upon the next five pages some factual information about the science situation in Washington.

GENERAL SCIENCE

Many More Millions for War But Curtailment for Science

"Economy" Slashes Net a Total of \$10,000,000 From Science Budget, While Half a Billion May Go to War

FOR PUBLIC WORKS and other emergency measures to combat the depression, the Federal Government plans to make a capital expenditure of some \$3,600,000,000.

As an "economy" measure, the Federal Government under the economy powers of the President and the Budget Bureau director, is effecting "savings" of \$10,000,000 in the scientific research and service work of the regularly established, permanent bureaus.

Contrast these cross currents under the new deal.

A minor item in the public works program is the construction and modernizing of warships and Navy Yards at the cost of \$354,000,000, an expenditure more than 35 times the "savings" being made in scientific research.

A minor suggested item in the public works program is the mechanization and rehabilitation of the army, estimated to cost about \$200,000,000, which is about 20 times the "savings" in scientific research.

Some \$13,000,000 is urged to be spent from public works funds on "ammunition for the army." This fund to keep our arsenals full of explosives

would more than restore the disastrous "economy" cuts being made in scientific research and service.

War, past and future, has always been the glutton in government cost. In recent years, war, past and future, has absorbed some 70 per cent. of the total expenditures of the Federal Government. Scientific research and service has accounted for only a fraction of one per cent. of the total federal expenditures.

Under the so-called economy program of the Roosevelt administration, the expenditures for scientific research and service are being cut to about sixty per cent. of what they were in the 1932 fiscal year. The millions of dollars poured into military activities, past and future, have suffered no decrease but will be increased greatly according to present indications. It seems probable that at least \$500,000,000 of the public works funds will be devoted to the army and navy, so that in the years of peace 1933-34, the military expenditures of the United States will rise to high levels.

Without any pacifistic discussions of these large military expenditures from

public works funds, it is being argued in scientific circles that the drastic cuts in scientific research and service in the Federal Government departments are fully as dangerous to Uncle Sam's military establishment as actual curtailments in military funds would be.

At the outbreak of the World War, the National Bureau of Standards, the nation's greatest scientific bureau, practically became a military bureau, for example.

If the cuts in scientific research to the extent of \$10,000,000 could be restored by the assignment of public works funds to this purpose, and if further another \$10,000,000 were made available for the emergency employment of unemployed scientists, estimated to number 10,000 to 15,000 throughout the nation, the advocates of scientific preparedness feel that this investment of public works funds in science would be in the long-run far more fruitful than an equivalent expenditure of money for purely military purposes.

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GENERAL SCIENCE

Need Public Works Funds To Restore Science Work

A FEW MILLIONS of dollars of the \$3,300,000,000 public works funds are being sought by government bureaus in order that the harm to the Government's scientific research work done by "economy" cuts will in part be mitigated.

Secretary of Commerce Roper has announced applications to the Public Works Board for grants that include:

For Bureau of Standards, \$450,000; Bureau of Mines, \$275,000; Bureau of Fisheries, \$1,072,474; Coast and Geodetic Survey, \$3,500,939; Bureau of Lighthouses, \$2,355,068. These funds are sought for "new projects" and if obtained it is expected that many of the scientific personnel furloughed for reasons of Budget Bureau "economy" slashes will be put back to work.

It is unofficially estimated that about half of the 380 Bureau of Standards employees whose pay stopped July 1 might be allowed to continue their important scientific tasks if the \$450,000 public works funds are granted. The Bureau of Standards was severely cut by the Budget Bureau deductions from 1934 appropriations, being allowed only \$1,363,000 instead of about \$2,000,000 appropriated by Congress. The Bureau of Standards is also expected to play an essential part in the gigantic public works construction program by testing materials purchased. If this work can not be done because of lack of funds, there is the possibility of the

Government's losing millions of dollars due to inferior materials used by contractors.

Essential safety work and fundamental research for the mining industry of the Bureau of Mines will be rescued if the funds are granted that bureau.

Similarly it is contemplated that the coastal mapping and triangulation work of the Coast and Geodetic Survey can be speeded up with employment of engineers and other technical men now out of jobs due to the depression. The Bureau of Fisheries sees possibilities of serving the public good by expansion of its fisheries conservation and propagation work.

Reconditioning Projects

Applications have also been filed by Secretary Roper for public works funds for reconditioning projects; Aeronautics, \$487,500; Coast and Geodetic Survey, \$79,200; Bureau of Fisheries, \$230,000; Bureau of Lighthouses, \$2,283,920; Navigation and Steamboat Inspection, \$30,000; Bureau of Standards,

\$148,500. These funds will be for repairing and modernizing buildings and equipment and are not expected to aid materially in salvaging abandoned scientific research.

Although no formal applications have been made by Secretary of the Interior Ickes for public works funds for carrying on some of the curtailed activities of the Geological Survey, which has also been hard hit by the economy program, such grants may be sought. Secretary Ickes has announced his determination to attempt to secure jobs for furloughed employees of his department with some of the new agencies of the government.

The effect of the economy program on the Department of Agriculture's many research projects is not yet known. Changes are being made slowly in that department and its may be several weeks before the details will be known. It is known that Secretary Wallace is determined that the scientific research of the department shall not be disrupted by the economy program.

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On The Science Front In Washington

PUBLIC HEALTH

Federal Health Research Slowed by Dismissals

THE SCIENTIFIC investigations into the causes and methods of fighting disease which are being carried on by the U. S. Public Health Service will be considerably slowed but not badly hurt by the dismissal of employees as an economy measure.

None of the key people in the research program is being dismissed, Dr. L. R. Thompson, assistant surgeon general in charge of scientific research, stated.

At the National Institute of Health, formerly the Hygienic Laboratory of the Service, not more than eight or nine employees are being dismissed. These are laboratory attendants. Altogether between thirty and thirty-five employees in Dr. Thompson's division are being dropped as an economy measure, but most of these are married, their husbands or wives being employed by the government. Some of these were part-time workers on problems of child hygiene. Most of them were technical assistants. None of the highly trained scientists has been dropped.

As a result, the scientists will have to do their own dirty work, such as washing test tubes and preparing stock reagents. This will slow them in their investigations, but it will not stop them.

True to its traditions of self-sacrificing service, this branch of the government is making no complaint over the situation and is cheerfully preparing to carry on its important work in spite of all obstacles, such as lack of technical assistance.

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GEOLOGY

Geological Survey Loses Men of International Fame

BUDGET BUREAU slashing of funds for scientific purposes will cause the loss to the Government service of a galaxy of geologists of national and international reputation.

Some of these have been in the U. S. Geological Survey for more than thirty years, and so are eligible for the retirement annuity. Others, younger men, will have to be dismissed without that amelioration of circumstances.

It is not yet known just how high the total of dismissals will be, but about 150 have already been added to the army

of the scientific unemployed from the Survey. Present plans are taking into consideration the possibility that the new public works program will turn over some funds to the Geological Survey. In case money is not made available from this source the dismissals now will only mark the beginning of the disruption of the Government's staff of geologists.

Dr. Arthur Keith, treasurer of the National Academy of Sciences, and representative of the United States at many international scientific meetings, is one of the distinguished men slated to go. His specialty has been the structure of the earth, and his research has given the world fundamental information for the understanding of earthquakes.

Ore Expert Lost

The Government loses an expert on rocks, ores, and minerals, with the letting out of George Steiger. Mr. Steiger has been with the Geological Survey since 1892. The chemical and physical laboratories in the Interior Building are the result of his planning.

A specialist in the examination of minerals in well cuttings from the recently discovered potash fields of Texas and New Mexico is lost in Frank Cath-