algae replaces mosses. Few observations have as yet been recorded for subhumid and humid regions; but because the more luxuriant vegetation excludes most of the sunlight from the pebbles, cryptogamous plants probably are less abundant.

Further study of the occurrence and the distribution of peat beneath pebbles and of the plants contributing to its formation is indicated. Specific names of the plants have not yet been determined.

The term "pebble peat" is suggested for the phenomenon described. As yet no mention of the phenomenon has been found in the literature.

B. H. WILLIAMS

DIVISION OF SOIL SURVEY,
BUREAU OF PLANT INDUSTRY,
U. S. DEPARTMENT OF AGRICULTURE

BIOLOGICAL SPECIFICITY OF FOLIC ACID

NIELSEN and Elvehjem[1] and Martin[2] have demonstrated the counteracting effect of folic acid concentrates on growth inhibition of rats due to succinylsulfathiazole and sulfaguanidine. These findings, indicating synthesis of folic acid by the intestinal bacteria, are in accord with the findings of Mitchell and Isbell[3] on synthesis of this substance by rat intestinal flora.

Recent investigation of folic acid concentrates in our laboratory has indicated that they can not be regarded as biologically pure, unless this fact has been demonstrated. Two significant impurities may be present, namely, xanthopterin and *p*-aminobenzoic acid. The amount of xanthopterin present may be several per cent., even in the most potent preparation yet tested on animals.[1] This preparation, which was furnished by our laboratory to Nielsen and Elvehjem (designated 15,000 times as potent as solublized liver), has since been found to contain also 1 per cent. of *p*-aminobenzoic acid.

Since Totter and Day[4] have found that xanthopterin is able to counteract the effect of succinylsulfathiazole on rats, its presence in folic acid concentrates can not safely be neglected. The amount of *p*-aminobenzoic acid present in the potent preparation referred to above is probably not enough to seriously affect the results, but the absence of significant amounts of *p*-aminobenzoic in many folic acid concentrates can not be assumed.

We wish to make clear that the biological identity of folic acid is not questioned by these findings, since in the microbiological test for folic acid using Strept. lactis R both xanthopterin and *p*-aminobenzoic acid are inactive.

HERSCHEL K. MITCHELL

1 E. Nielsen and C. A. Elvehjem, *Jour. Biol. Chem.*, 145: 713, 1942.
2 G. J. Martin, *Proc. Soc. Exp. Biol. and Med.*, 51: 353, 1942.
3 H. K. Mitchell and E. R. Isbell, Univ. of Texas Publication No. 4237, 125, 1942.
4 J. R. Totter and P. L. Day, *Jour. Biol. Chem.*, 147: 257, 1943.

THE KILGORE SENATE BILL

IN the April 23rd issue of SCIENCE, Elliott and Grundfest, the latter national secretary of the American Association of Scientific Workers, highly endorsed the Kilgore Senate Bill 702. They believe with the proponents of this bill that research, development and technology in the United States have no unity of purpose or coordination, and are in a highly disorganized state.

As a matter of fact, the very opposite is true, for never in the history of the country have science and technology been so well organized and coordinated as they are to-day. Striking results have been accomplished by the coordination of governmental agencies, universities, privately endowed institutions, and industrial research laboratories. One may state that the scientific, technological and production men of the United States are doing the greatest job ever undertaken in the history of mankind, namely, converting a great country in less than two years from peacetime pursuits to an all-out war effort. It is safe to say that over 95 per cent. of our scientific and technical manpower and facilities are now highly organized and coordinated to the single end of advancing the war effort, despite the many difficulties involved.

Coordination extends not only to efficient use of materials but to effective mobilization of the human element in research. Our scientists are not only carrying on fundamental and exploratory research at a higher tempo than ever before, but also by applied research providing the materials necessary for the successful prosecution of the war.

In the *Journal of Industrial and Engineering Chemistry* (35: 385, 1943) there is a statement on "Scientific Regimentation" as implied by the Kilgore bill, by Walter J. Murphy.

"The very wording of the 'Declaration of Policy' constitutes a direct insult to the scientific minds of this country and is contrary to the actual facts, as any unbiased study will clearly show.

"We do not have 'an unassembled and uncoordinated state of information concerning existing scientific and technical resources'; we do know that there is no lack of 'an adequate appraisal'; the war effort is not suffering because of 'unplanned and improvident training, development, and use of scientific and technical personnel, resources, and facilities in relation to the national need,' with the exception of the policy of drafting badly needed technically trained manpower into the armed forces."

From time to time our attention is directed toward the super-coordination of science, technology and in-

dustry in Germany as if it were a shining light toward which we should direct our footsteps. This very regimentation of science, technology and industry will prove that nation's undoing. By enforcing regimentation Germany has frozen her scientific and technical assets. As a result she will lose the war because she has destroyed the freedom and competitive spirit which is fundamental to research and on which her ultimate survival depends. We should not make the same blunder by enactment of the Kilgore bill.

The passage of Senate Bill 702 to establish the Office of Scientific and Technological Mobilization would be exceedingly detrimental if not disastrous to the war effort. My convictions are based on the following:

Practically every laboratory in the nation is in the service of the government. These laboratories are headed and staffed by specialists in their particular fields, whether in universities, colleges, research foundations, or operated by individuals and corporations. It is unnecessary for the government to take them over as their programs would be disrupted by any change in management.

Scientists and technologists, though primarily individualists, are submerging personalities in cooperative research of the widest scope, intent only with getting the job done as well and as speedily as possible.

To center the myriad researches now going on in one organization would throw the programs out of gear, causing months or perhaps years of delay while adaptation to the new conditions took place, and during this time we could well lose the war.

As one illustration of scientific and industrial cooperation, individual oil companies, vigorous competitors in peacetime, are now working together, disclosing to each other their processes and technique relating to 100-octane aviation gasoline, lubricants, components of synthetic rubber, toluene for T.N.T. and many other materials produced from petroleum. There are no secrets in the oil industry for the duration.

It is suggested that every scientist, technologist and industrialist carefully study Senate Bills 607 and 702.

GUSTAV EGLOFF
PRESIDENT OF THE AMERICAN INSTITUTE OF CHEMISTS

QUOTATIONS

SCIENCE AND THE CENSOR

IN a joint statement the Army and Navy at last acknowledge that "radar" (a radio detecting and ranging device which spots distant enemy aircraft and which helped to thwart the German attempt to reduce Great Britain to submission) has its uses in war. The press may now presumably tell the public of a device which was patented in half a dozen different forms nearly twenty years ago and described at least in principle in official textbooks. The restrictions by which other military and naval inventions are hedged should also be removed so far as common sense and military discretion permit. By this time, for example, our famous Norden bombsight must have fallen into the hands of the enemy. And so with range-finders and other apparatus captured by the Japanese in the Philippines.

For good reasons of their own the British often release information which is cabled to this country, but which, under the prevailing rules, must be suppressed here. A knowing newspaper man could dig it out of the speeches made by Government spokesmen in response to questions asked in the House of Commons or from articles which have appeared in *Nature, Engineering,* and the *Aeroplane* and which have undoubtedly been approved. But if he prepares an article on his findings he is likely to encounter a granite wall in Washington. Can it be that we know better than the British what may or may not be revealed?

This policy of silence is not limited to strictly military and naval technical news. It includes biology and medicine. It has even happened that statistics given by the President and Cabinet officers in public addresses have been suppressed. Yet the most absurd stories of German technical achievements appear, with the result that the Nazis are credited with far more ingenuity than any people can possess.

It is manifest that the British and American officers of censorship are not coordinated as they should be. It is also manifest that our censors either do not know what is technically new and what is not or that their superiors have given orders that have no justification in the light of military necessity. There has been some disposition of late to take the science writers of the press into the confidence of the War Department, as the recent inspection by invitation of some Eastern war plants indicates. The accounts that the reporters published of what they saw must have been heartening to millions of readers. We want more such articles. A policy of secrecy where there are no secrets can not fail to have a depressing effect on morale. Nothing is worse in time of war than rumor. And the only way to counteract rumor is to publish facts well known to enemy scientists and engineers.—*The New York Times.*