effects of the flood on Hat Creek are being turned to good account, while many visitors are safely climbing the peak. Although it is possible that Vulcan is simply conserving his forces for a future outbreak, the general indications are that he is closing up the Lassen Peak branch of his laboratory for the season, perhaps with the intention of giving a small exhibit next spring when the snow melts."

UNIVERSITY AND EDUCATIONAL NEWS

DR. W. S. FRANKLIN has resigned from the professorship of physics in Lehigh University.

DR. JOHN LEE COULTER has been appointed dean of the College of Agriculture and director of the Experiment Station of the West Virginia University. He goes from the George Peabody College, and will take the place of E. D. Sanderson, who resigned about a year ago.

DR. OSCAR THEODORE SCHULTZ, formerly assistant professor of pathology in the medical school of Western Reserve University, has been appointed professor of pathology and bacteriology in the College of Medicine, University of Nebraska.

DR. JOHN N. SWAN has resigned his position in Monmouth College to accept the head professorship in chemistry in the University of Mississippi.

DR. E. L. TALBERT has been appointed secretary of admission in the University of Cincinnati, also giving the courses in social psychology.

JOHN JENKINS BUCHANAN, A.M., M.D., Ph.D., professor of surgery in the school of medicine, University of Pittsburgh, for the past fourteen years, has resigned his active teaching and has been elected professor emeritus. Robert Tablott Miller, A.B., M.D., for the past five years a member of the staff of the department of surgery of the school, lately holding the position of associate professor of surgery, has been promoted to the full professorship in charge of the department. Dr. Miller is a graduate of Amherst College and Johns Hopkins University Medical School. He held the position of resident on the surgical staff of the Johns Hopkins Hospital for a period of six years, following which he was elected to the position of instructor in surgery in the Johns Hopkins Medical School, which position he held for a period of two years, prior to his taking up his residence in Pittsburgh.

DR. J. R. SCHRAMM, assistant to the director of the Missouri Botanical Garden and instructor in botany at Washington University, has been appointed assistant professor of botany in the New York State College of Agriculture at Cornell University. Dr. Lester W. Sharp has been promoted to an assistant professorship in botany at the same institution. Other recent appointments in botany at the New York State College of Agriculture are as follows: J. Marshall Brannon, Albert R. Bechtel and Frank B. Wann, instructors; John P. Benson, Robert Stratton, Lawrence Erickson, George R. Gage and Harry E. Knowlton, assistants.

MR. HOWARD B. WAHA, who graduated in civil engineering from the Pennsylvania State College in 1909, and who has been employed in engineering work with the U. S. Forest Service in New Mexico and Arizona since graduation, has accepted the position of assistant professor of forest engineering in the New York State College of Forestry, Syracuse University.

W. A. ELLIS, a teaching fellow in the State College of Agriculture at Cornell University, has been elected instructor in forestry entomology. He will give his attention to insects affecting shade and forest trees of the state, and will assist Dr. M. W. Blackman, forest entomologist of the college.

PROFESSOR R. ROBINSON, of the University of Sydney, has been appointed to the newly constituted chair of organic chemistry at the University of Liverpool.

DR. HANS REICHENBACH, professor of hygiene at Göttingen, has declined a call to Halle.

DISCUSSION AND CORRESPONDENCE

PUBLIC HEALTH IN AMERICA

TO THE EDITOR OF SCIENCE: I was much interested in the article by Dr. W. W. Ford,

"The Present Status and Future of Hygiene or Public Health in America," read at the May, 1915, meeting of the Association of American Physicians, and published in SCIENCE, July 2, 1915. His presentation of the subject is an interesting exposition of the medical viewpoint and bias in public health, but many of his statements are dogmatic assertions, and are highly debatable; others are inconsistent with each other. For example, compare (page 11, column 1)

> . . . every medical school in this country should have its department or institute of hygiene. . . . It makes little difference whether the head of this department is a chemist, a bacteriologist or a physicist, since the problems of hygiene must be approached from various angles . . .,

and (page 11, column 2):

> It is essential that hygiene be presented as a distinct and independent science and not as a phase of bacteriology, or of chemistry, or of physics,

with (page 11, foot of column 2),

> Above all it must be remembered that hygiene is a medical subject and a part of medicine. Its methods are the methods of medicine . . .,

and with (page 12, column 2),

> . . . the health officer, be he city, county or state, has a distinct function, the intelligent exercise of which requires a medical training.

Surely if chemists, bacteriologists and physicists are competent to teach hygiene or public health (which is debatable), they should be competent to practise it; obviously if public health or hygiene is admitted to be a distinct and independent science, it can not be in the same breath a mere subsidiary of medicine.

Some of the main points in Dr. Ford's article must here go unchallenged for lack of space, but before proceeding to my main statement I wish to take up one minor point. He states (page 10, near bottom of column 2):

> The indifference to hygiene as a science lies in our universities and in our medical schools, and the responsibility for the failure of its development rests squarely upon them.

This is at least partly true, unless we wish to quibble as to whether public health is a science or the application of facts and principles of science. But the failure of the *practise* of public health rests squarely upon the medical profession. Led astray by idealism and zeal for the public welfare (some of the finest traits of the profession as a whole), they have offered their services as health officers in this country too often either without compensation or with very inadequate compensation. This has had a bad effect upon the public mind. Rightly or wrongly, the public tends to value things or services in proportion to the price they pay. This unselfishness by the profession will retard the development of public health in the future, as it has in the past, by making the public unwilling, until educated, to pay well for full-time technically trained health officers when they are able to get part of the time of an untrained practitioner-health-officer at nothing or next to nothing.

As has been well said before, we have heretofore chosen practitioners of medicine as our health officers because they came nearest of any class in the community to having the qualifications necessary for the work. As a matter for argument, I submit that practitioners of medicine lack much of the fundamental training and knowledge required for public health work, and some of their training and qualifications, except in unusual men, actually unfits them for true public health work, in part for the following reasons:

1. Public health is a function of government, not an appendage to the practise of medicine.

2. Public health is a distinct entity, an application of the facts and principles of various fundamental sciences to the *maintenance of health* and the *prevention of disease.*

3. Public health must be based on the facts of health and disease in the mass (in numbers, space and duration of time); the practise of medicine mainly upon individual cases.

4. The practise of medicine is an individual endeavor for private gain derived from individuals in a community; the practise of public health is a public endeavor by and for

the community, and paid for by the community.

5. Medical practise combined with public health service is an incompatibility.

Recently it has been argued that the training and experience of the sanitary engineer qualify him for public health work. As a matter of fact much of the sanitary engineer's training is exceedingly valuable in public health work, but the sanitary engineer as such is certainly no more qualified than the physician. The fact that several sanitary engineers have proved successful as administrative health officials by no means proves that the training of the sanitary engineer is the ideal foundation for public health work. The same arguments that have been presented for the sanitary engineer might be advanced for the training and qualifications of the attorney, the statistician, the chemist, the bacteriologist, the parasitologist, the veterinarian or the sociologist. All have labored in the field of public health, and all have at least some qualifications of great value.

Public health is now casting off the swaddling clothes of its infancy, and entering upon a period of vigorous youth. Medicine has been one of its parents, but now that the child is endeavoring to travel its own path we hear that parent uttering warning cries and, like all good parents, prophesying immediate or ultimate disaster if its rules and precepts are not heeded. For example, witness Dr. V. C. Vaughan's statements before the 1915 convention of the American Medical Association in San Francisco, and Dr. Ford's paragraph at the top of column 1 on page 13. We have heard several such utterances lately. Some we may suspect of having ulterior motives behind them; others, as the ones referred to, are admittedly cries of alarm on the part of the medical profession at the prospect of a fancied loss of prestige and influence.

In the last analysis the highest type of public health official will be a statesman, an administrator, an educator, above all an efficient public executive. He will have a broad public vision, partly from native qualifications, but developed by a broad training in public health *as such,* which will include much that is in medicine, but leave out much of medical training; which will include all that is essential in sanitary engineering, law, sociology, and the various fundamental sciences such as chemistry, biology, bacteriology, etc. He will also have an excellent foundation of general culture. He will superintend the work of physicians, engineers, statisticians, chemists, bacteriologists, attorneys, veterinarians and the like employed for special limited but intensive fields in public health, and will be the guiding hand in shaping public policy with respect to health. His life work, training and ideal will be public health, not private practise with public health on the side.

I realize that in thus criticizing some of Dr. Ford's statements I also have relapsed into dogmatic statements. This is difficult to avoid in the brief space of a letter, where proof would require a volume. I hope, however, that I have been able to show that certain viewpoints and theories in public health are debatable, and to have presented briefly a different, and I hope a better viewpoint.

HAROLD F. GRAY

BOARD OF PUBLIC SAFETY,
PALO ALTO, CAL.

THE ATTITUDE OF THE STATE OF CALIFORNIA TOWARD SCIENTIFIC RESEARCH

THE note on the Scripps Institution for Biological Research which appeared in SCIENCE, June 18, 1915, contains the statement that the state of California contributes $7,500 a year toward the support of the institution.

This should be amended to the extent of saying that at the last session of the legislature, which adjourned a few weeks ago, the contribution was increased by $5,000, thus making the income of the institution from the state after July 1, 1915, $12,500 a year.

This discrepancy in statement is too small a matter to be in itself worth noticing, but as indicative of the attitude of the state toward the institution and toward scientific investigation generally, it is quite deserving of notice.

Two years ago when the first allotment was made by the state to the university for the