

basicity, and the plutonic intrusions then begin with the most basic type and end with the most acid. I mention this only to point out that, while the larger divisions of our ideal classification will have a certain geographical and tectonic significance, the subdivisions will show a certain correspondence with the sequence in time of the various cognate rock-types.

To pursue the subject farther would serve no useful purpose. It is clear that, if a natural—by which I mean a genetic—classification of igneous rocks is ever to become a reality, much work must first be done, both in the field and in the laboratory, each petrographical province being studied from the definite standpoint of the evolution of its rock-types from one parent stock. Such researches as those of Brögger in the Christiania province may serve as a model. It would be rash to venture at present more than the most general forecast of the lines which future developments may follow; but I think it calls for no less hardihood to set limits to what may ultimately be possible in this direction. There are those who would have us abandon in despair all endeavor to place petrography upon a genetic basis, and fall back upon a rigid arbitrary system as a final solution of the difficulty. This would be to renounce forever the claim of this branch of geology to rank as a rational science. I have said enough to show that I am one of those who take a more hopeful view of the future of petrology, confidently expecting it to show, like the past, a record of continued progress.

ALFRED HARKER

*LETTER TO THE SECRETARY OF AGRICULTURE DISMISSING THE CHARGES AGAINST OFFICERS OF THE BUREAU OF CHEMISTRY*

I RETURN herewith the papers which you have submitted to me in the matter of the re-

port of the Committee on Personnel of the Department of Agriculture, in which, after summarizing the evidence adduced before them, they recommended that Dr. H. H. Rusby, pharmacognosist in the Bureau of Chemistry, be dismissed from the service; that Dr. L. F. Kebler, chief of the drug laboratory in the Bureau of Chemistry, be reduced from his present position, and Dr. H. W. Wiley, chief of the Bureau of Chemistry, and Dr. W. D. Bigelow, assistant chief of the bureau, be given an opportunity to resign from the positions which they now hold in the Bureau of Chemistry, on account of the irregularities in the appointment of Dr. H. H. Rusby.

The facts shown by the papers, stated shortly, are as follows:

Dr. Rusby lived in New York, and was employed as a scientific expert in the Bureau of Chemistry to examine importation of drugs, under an agreement by which he received \$20 a day for laboratory work and \$50 a day for attendance in court.

On May 24, 1909, the Attorney-General advised the Secretary of Agriculture that, under the act of March 4, 1907 (34 Stat. 1289), no classified scientific investigator should receive a salary to exceed \$9 a day. On May 29, 1909, an order was issued putting him on the roll at a salary of \$9 a day when actually employed. Dr. Rusby objected to this, and applied to Dr. Kebler, chief of the drug laboratory, to secure a different arrangement. The matter seems to have been held in abeyance for some time. Finally, as a result of conference between Dr. Kebler, Dr. Bigelow and Dr. Wiley with respect to the request of Dr. Rusby for an increased compensation, Dr. Wiley said he would submit to you for your approval an appointment of Dr. Rusby at a salary at the rate of \$2,000 per annum on the miscellaneous roll. Dr. Bigelow then wrote to Dr. Rusby, under date of January 2, 1910, as follows:

Dr. Kebler and I took the matter up with Dr. Wiley to-day, and he said he would approve it if we had on record an understanding with you, so we could not be held responsible for your receiving

an annual salary and not devoting your whole time to the bureau. I told him that if you were given an appointment at the rate of \$170 a month, you would agree not to receive more than \$20 a day for time actually employed. By that I mean the usual official day of seven and one half hours. This would be equivalent to eight and one half days a month on the average. I told him that if it happened that your work for the department amounted on the average to less time than that you would ask for leave of absence for sufficient time to bring it to that basis.

Dr. Rusby answered this letter and questioned what was meant by it. He said he did not understand Bigelow's letter clearly and supposed that if he did not earn the entire salary, he would not expect to receive any more than was earned.

Meantime, on February 6, Dr. Wiley submitted to you an appointment of Dr. Rusby at a salary at the rate of \$1,600 per annum on the miscellaneous roll. He made the reduction after examining the records and finding the amount of work done by Dr. Rusby during the preceding two years. You approved this appointment.

After the appointment Dr. Bigelow wrote Dr. Rusby that he thought the present arrangement was better than the former arrangement when he was receiving \$20 per day for laboratory work, and \$50 a day for court work, because, he said, "you are now assured of getting a certain amount each month, irrespective of the time spent, and you can still so plan your work as to interfere with your regular duties to a minimum extent."

This did not satisfy Dr. Rusby, and he sought further information in a letter dated March 3, 1911, as follows:

Kindly recall that on my side the basis of compensation is not less than \$20 per day. At that rate only eighty days' work per year are provided for, and that is not time enough to satisfactorily perform more than the current port work here, leaving no time for examination of interstate samples, especially microscopical examinations, or for attendance at court. For every day at court, on the average, one day of preparation is required.

The above facts lead to the inquiry, would not the salary named compel me to either do very

much more than eighty days' work per year or otherwise fail to do the necessary amount of work in a satisfactory manner?

On March 4 Dr. Kebler wrote to Dr. Rusby, stating among other things the following:

Personally I am of the opinion that your new appointment is much better than the old. Under this appointment you can do as little as one day's work per month, and you get your salary. On the other hand, if you work five or ten days, your salary would be the same per month. It seems to me that you have the matter largely in your own hands. I am satisfied that if you do not accept the new appointment nothing more can be done and your services, so far as our work is concerned, can no longer be utilized materially in the future.

On March 6 Dr. Rusby wrote to Dr. Kebler saying that he had decided to accept the appointment.

The nub of the charge by the Personnel Board was that Dr. Wiley, Dr. Kebler Dr. Bigelow and Dr. Rusby in effect conspired to put on the record a contract for a general employment of Dr. Rusby's services for \$1,600 a year, but actually and secretly made a contract with him by which he was only to do enough work during the year for the \$1,600 to secure him a compensation of \$20 a day, and that this was done in deliberate and defiant violation of the law as interpreted by the Attorney-General in the opinion already referred to, in which he held that congress had limited the compensation of experts to \$9 a day.

After you submitted to me the report of the Personnel Board, I asked the Attorney General to examine it and give me his opinion in respect to the matter, because it concerned the violation of the law as interpreted by him in one of his opinions. He did so, and advised me that the recommendations of the Personnel Board ought to be carried out. In connection with his recommendations he invited attention to a clause in the Act of Congress approved March 15, 1898 (30 Stat. L, 316), still in force, that enjoins upon the head of each department the duty of exacting from the employees in that department who are

under an annual salary labor amounting to seven hours every day but a holiday.

An examination of the records satisfied me that the questions had not been presented to the persons involved in such a way as to enable them to make full defence. They had only been called as witnesses and cross-examined without a full understanding that they were under trial which might involve their dismissal. Accordingly, I directed you to submit the whole record, together with the opinion of the Attorney-General, to each one of the persons charged, and invite from him an answer. These answers were filed in due course, and are quite full in detail. The answer of Dr. Wiley specifically denies that he ever saw the correspondence between Dr. Kebler and Dr. Rusby, or that he ever consciously entered into an arrangement by which Dr. Rusby was in effect to receive compensation at a rate in excess of that prescribed by the statute as interpreted by the Attorney-General. The truth is, it appears from the answers of Dr. Wiley, Dr. Kebler and Dr. Bigelow, that there had been a good many precedents in the department which seemed to justify the employment of Dr. Rusby at an annual salary, when it was not expected that his entire time would be taken up. This was the case with respect to the employment of what was known as the Remsen Board. That board was created by order of President Roosevelt for the very important purpose of enabling the Secretary of Agriculture to have reviewed the decisions of the Bureau of Chemistry in cases where those decisions involved disputed technical questions, and would, if sustained, have destroyed valuable and profitable business theretofore regarded as lawful. In such cases it was deemed wise not to allow the destruction of what would be otherwise lawful property and business on the decision of only one expert or the head of the bureau. Accordingly, the Remsen Board was created, and is composed of experts, all of whom were known to be engaged in other professional work than that of the reviewing board. Dr. Remsen, the head of the board,

occupies an important position in Johns Hopkins University, and that is his principal occupation. Another member, Dr. Russell Chittenden, of the Sheffield Scientific School, is dean of that school, and that is his chief vocation. Hence, the employment of the Remsen Board at the rate of \$2,000 a year for each member necessarily involved the proposition that such an annual salary might lawfully be paid without requiring labor of seven hours a day from each person so employed. This the Attorney-General in his opinion intimates is contrary to the statute, but in the Agricultural Department it was not thought to be the case. Solicitor McCabe, to whom I referred the question of precedents made in the case, replied that in the practise of the department the clause in the appropriation act of March 15, 1898, had been held to have no application to the employment of experts outside of Washington.

It is necessary fully to understand this difference between the attitude of the department toward an employment at an annual salary of this kind and the opinion of the Attorney-General in this matter, because if Dr. Wiley and his associates had understood that the \$1,600 annual salary required them to exact from Dr. Rusby seven hours a day for all the work days of the year, then of course his employment must have been known by them to be illegal and under the circumstances to be only a cover for a different contract of employment; but if they understood, as seems to have been the case generally in the agricultural department, that such an employment at an annual salary might be entered into with experts of this kind, and only subject the experts to an obligation to work for the department whenever called upon, with the understanding that they had some other vocation to which their chief attention was given, it clearly reconciled the action of Dr. Wiley with a desire to comply with the law. The recommendation of the Attorney-General given to me was upon only part of the evidence, and hence his judgment was different, doubtless from what it would have been if

he had had the whole record before him, as I have now. It seems fairly clear that Dr. Wiley, after an examination of the records concluded that the employment of Dr. Rusby at \$9 a day for laboratory work and \$50 a day for court work would amount to \$1,600 a year if the department called on him whenever they needed him, and that it was this arrangement to which you consented. In Dr. Kebler's anxiety to induce Dr. Rusby to accept the new terms of employment he certainly betrayed a willingness to construe the contract of employment of Dr. Rusby at \$1,600 a year in one way to reconcile it with the law, and in another way to satisfy Dr. Rusby in his wish to secure \$20 a day, and I think he ought to be reprimanded for his disingenuous conduct in writing such letters as he did. He said that he did not intend to violate the statute as interpreted by the Attorney-General, and indeed that he did not know exactly what the ruling was; but whether he did or not, the language of his letters does not have a commendable tone and suggests a willingness to resort to evasion that calls for official reproof.

In respect to Dr. Rusby I do not find that he was advised at all as to the legal difficulty, and that he was only seeking for additional compensation which he thought to be adequate.

The truth is, the limitations upon bureau chiefs and heads of departments to exact per diem compensations for the employment of experts in such cases as this is a doubtful legislative policy. Here is the pure food act, which it is of the highest importance to enforce and in respect to which the interests opposed to its enforcement are likely to have all the money at their command needed to secure the most effective expert evidence. The government ought not to be at a disadvantage in this regard, and one can not withhold one's sympathy with an earnest effort by Dr. Wiley to pay proper compensation and secure expert assistance in the enforcement of so important a statute, certainly in the beginning when the

questions arising under it are of capital importance to the public.

If this were a knowing, wilful, deliberate effort to evade the statute as construed by the Attorney General, accompanied by a scheme to conceal the evasion and violation, I should think the punishment recommended by the personnel board, and concurred in by the Attorney-General, was none too great; but an examination of the whole case satisfies me that a different construction ought to be put upon what was done; that the evidence does not show that Dr. Wiley was a party to the correspondence or the letters upon which the chief charge is founded, and that his action in the matter was only in accord with previous precedents in the department which justified him in doing what he did.

With respect to the other persons charged, I find an overzeal in Dr. Kebler and Dr. Bigelow which prompted a disingenuous method of squaring Dr. Rusby's desire for what he thought was adequate compensation with the contract which you and Dr. Wiley were willing to make with him and that for this Dr. Kebler and Dr. Bigelow should be reprimanded by you. So far as Dr. Rusby is concerned, with respect to this particular contract, I do not find him at fault. For purposes of punishment or dismissal, I can not charge him with knowledge of the legal difficulties involved in his employment.

I examined the record in this case a number of weeks ago and reached the conclusion which I have stated here; but meantime, a committee of the House of Representatives deemed it proper to institute an investigation into the Department of Agriculture, and especially into the Bureau of Chemistry and its relation to the department generally.

It seemed to me under these conditions that perhaps it was wiser for me to delay until the investigation was completed and the report of the committee made. The committee has not made a report, although I believe the evidence has been substantially closed, and will not do so until the next session of congress. Further consideration satisfies me that there

are very much broader questions involved in the investigation and the evidence there brought out than in the present charge which is narrower and definite and can now be properly disposed of. The broader issues raised by the investigation, which have a much weightier relation than this one to the general efficiency of the department, may require much more radical action than the question I have here considered and decided.

There is another charge against Dr. Rusby for securing the appointment on the common laborers rolls, of a physician and expert, whom he could use to do his work at a very small stipend when he himself was called away in other employment. I regret to say that the arrangement which Dr. Rusby thus made is not especially creditable to him and shakes in some degree one's confidence in his avowed wish to make personal pecuniary sacrifice in the public interest for the enforcement of the pure food law. But Dr. Rusby's position as an expert of high standing is such that I do not think that any more than this expression of opinion should be imposed as penalty. My information is that the government needs his services and that he has already rendered valuable aid. The error referred to, committed by him, does not call for further action or remark.

You will communicate the result to the Personnel Board, and also to the persons charged.

Sincerely yours,

WILLIAM H. TAFT

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*PROFESSOR JOSIAH KEEP*

PROFESSOR KEEP, whose death, on July 27 last, at Pacific Grove, California, was recently announced, was born in Paxton, Mass., in 1849, and was a graduate of Leicester Academy and Amherst College (1874), taking his Master's degree as a post-graduate student in 1877. In that year he married Amelia Caroline Holman, of Leicester, Mass., and went to California. There he taught in the Golden Gate Academy and the Alameda High School, being principal of the latter from 1881 to 1885. In 1885 he became Professor of the Nat-

ural Sciences in Mills College, which, from small beginnings as a private seminary for girls, has through the efforts and generosity of its founders developed into a well-equipped and charmingly situated college, the Wellesley of the Pacific Coast.

Here Professor Keep found his life work as teacher and coadjutor with the still surviving founder, Mrs. Mills, and saw the branches of science originally confided to him alone, by degree represented in the teaching force by a number of competent instructors, while he retained for himself the subjects of geology and astronomy.

With the wide general knowledge required by his field of work, it was of course impossible for him to be a specialist in any, but his deep interest had been aroused in the study of the mollusca in which the Pacific Coast is so rich. Between 1881 and 1911 he published a series of what might be called primers of west-coast shells, illustrated with figures, enabling the beginner to gain a preliminary knowledge of the attractive shells of California. To these little books we may fairly ascribe much of the wide-spread interest which is to-day found among Californians and which by the cooperation of amateurs with specialists, has immensely increased our knowledge of the Pacific coast fauna.

The last of these manuals was published only shortly before his death. Professor Keep was one of the founders of the Chautauqua Assembly which meets at Pacific Grove, and frequently lectured to its classes on his favorite subject. He was also one of the most earnest supporters of the Museum and Library at Pacific Grove.

Modest, courteous, indefatigable and enthusiastic, he was primarily a teacher and organizer; beloved by his classes and appreciated by those reached through his books and so led to the study of nature. In his unassuming way he has done a good work and found his reward in doing it. He leaves a widow, son and daughter to mourn his loss.

WM. H. DALL