

NATIONAL OFFICERS.

The officers who have served the Society were elected at irregular intervals until the Miami Convention of 1931. Since that time, all officers have been elected for two years.

President.

Hans W. Vahlteich—1922 to 1925.
Elmer J. Trout—1925 to 1930.
Glenn L. Jenkins—1930 to —

Vice-President.

G. Carl Trasker—1922 to 1926(?).
Frederick Hood—1926 to March 1930.
Clifford C. Glover—March 1930 to May 1930.
Franklin J. Bacon—1930 to 1931.
Earl R. Serles—1931 to 1932.
Franklin J. Bacon—1932 to —.

Secretary.

Elmer J. Trout—1922 to 1925.
Clifford C. Glover—1925 to 1930.
Miss Zada Cooper—1930 to 1932.
Lloyd E. Harris—1932 to —.

Treasurer.

Miss Helen Anderson—1922 to 1926.
Justin L. Powers—1926 to 1930.
Bernard V. Christensen—1930 to —.

RECOGNITION.

The high standards maintained for membership in Rho Chi have resulted in the general recognition of the Society in pharmacy as the equivalent of what Phi Beta Kappa is in the arts. During the academic year of 1930–1931 an effort was made to secure recognition for the Society in non-pharmaceutical circles with the result that Rho Chi is now accorded a place in the directory of Banta's Greek Exchange. A sketch of the development of the Society will be given a place in the next edition of "Baird's Manual."

CORRELATING THE ASSAYING OF DRUGS WITH MICROEX-AMINATION.*

BY HARRY TAUB.

Enthusiasm on the part of the student for the subject we are teaching is highly desirable not only because the student will do better work in that subject, but because enthusiasm is contagious and very apt to spread to other courses once the student has become infected in a particular subject. How to achieve this objective in those subjects which are not popular with the average student has been a problem that we have wrestled with for many years. Very few students "take" to pharmacognosy like the proverbial fish does to water. Chemical assaying, however, is regarded much more tolerantly and even liked by some students. Three years ago, due to a change in the schedule, it became possible to combine certain work of the chemical laboratory with a related part of the work of the pharmacognosy laboratory and the result of this experiment is the basis of this paper.

The work of the pharmacognosy laboratory in the junior year of the B.S. course consists of the identification of representative powdered drugs of the U. S. P. and N. F. and the determination of their purity, in so far as a microscopical examination can determine adulteration. In the chemistry laboratory certain of these drugs are assayed according to the official directions for alkaloidal content, or total

* Section on Education and Legislation, A. Ph. A., Toronto meeting.

resins, or volatile ether extract, or crude fibre or whatever it is that the drug is assayed for. Under the present plan each student spends the first five months in the pharmacognosy laboratory identifying the official powdered drugs, while in the chemistry laboratory during this same period he is preparing volumetric solutions and becoming acquainted with assaying technique. He then receives in the chemistry laboratory certain powdered drugs for chemical assaying and at the same time he receives a one-gram sample of the identical drugs in the pharmacognosy laboratory. During the last three months of the course the student is "on his own;" no regular assignments are given in the pharmacognosy laboratory. Instead, the crude and powdered drug museum is thrown open to these students, and all the departmental library volumes pertaining to the subject are placed in the laboratory, as well as mounted reference slides of some 500 drugs, official and non-official, together with specimens of the common drug adulterants and adulterated drugs collected in the open market in the past. An instructor is in the laboratory during the entire period, but his instruction is limited to guidance. The professor is available in his office for consultation and explanation of the annotated reports returned to each student.

As the student completes each assay in the chemistry laboratory he tries to correlate the results with what the microscopical and microchemical examination has disclosed. Here is where the merger of the work of the two laboratories (although each is still a separate course) bears fruit. Let us examine some actual cases of what happens when the student begins to compare findings. One student found that his sample of powdered cloves appeared to meet official requirements microscopically, but yielded a very low volatile ether-soluble extract. He spent the better part of two laboratory periods in attempting to find a microscopically invisible adulterant for cloves and after much reading and examining of every specimen of cloves we have in the museum came to the correct conclusion that we had given him an exhausted sample. The incidental information this student acquired while searching for invisible adulterants created an interest and enthusiasm for the subject that he could not have gotten by the regular prescribed pursuit of the course as formerly given.

Another student faced this problem: his results in the chemical laboratory showed the drug (cinchona bark) to meet U. S. P. requirements; microscopical examination revealed the presence of a large amount of potato starch. Quantitative estimation indicated that about 20% of this starch was present. He therefore concluded that he had made a mistake in the assay and repeated it, obtaining the same result as before. Something was peculiar; he certainly could rely on the evidence of his eyes, and the chemical assays gave check results. The real value of the combined work is brought out whenever the student comes to such an impasse. For the next two weeks this student consulted almost everything he could find and examined dozens of cinchona barks (our museum contains over one hundred different samples and species of cinchona) and then it dawned on him that there might be a cinchona bark that yielded more than 5% alkaloids and that this was the explanation of why an adulterated bark still conformed to the chemical requirements of the U. S. P. The information this man gained about cinchona could not have been acquired by the orthodox method of study.

The best part of the plan is that we now have the students working far be-

yond the routine requirements whenever the findings in one laboratory do not coincide with those of the other laboratory. By judicious use of certain forms of sophistication this desirable situation can be brought about nearly every time. As a matter of fact, students find a straight standard sample the most difficult of all; should the findings coincide on the first examination they generally suspect we are putting something over on them.

Since this additional work is entirely voluntary, no hardship is inflicted on the student of average ability, for under this plan it is possible for the mediocre student to turn in his report when partially completed with the request that he be given additional help in the solution of his difficulty. Depending upon how much help is needed, a certain number of points are deducted from the total value of the report, and the student returns to the laboratory to try and complete the work with the aid of the new information. Should he again require aid, he may repeat the procedure, at the cost of a few more points. It is possible to obtain just the passing rating by this means, but it puts it squarely up to the student to ask for this aid, and the good student will exert himself to the utmost before resorting to this course. We have found that the innate pride of the student can be counted on to accomplish the desired end. Where the bright student would under the old plan do just the required amount of work, he now has the opportunity and the incentive to exert himself to the limit of his ability.

The work of both laboratories has improved considerably, and the student now looks forward to the last three months of the course with eagerness. As one man expressed it: "I like this course because it gives me a chance to show what I can do." We feel that this plan should be tried out with other combinations and compared with the present course as to the increase in initiative and interest displayed by the student in required but not popular subjects.

PHARMACOGNOSY LABORATORY,
COLLEGE OF PHARMACY,
COLUMBIA UNIVERSITY.

HOSPITAL DISPENSING IN AUSTRALIA.

The *Australasian Journal of Pharmacy* in a recent issue says editorially: "Pharmacists should take a greater interest in hospital movements. If they hold aloof they have no personal contact with the committee of management. Too often it is because of this that plans are agreed upon which might not be even considered were a pharmacist available on the committee to explain the position."

THE SERVICE OF PHARMACY.

Chairman Herbert Skinner of the British Pharmaceutical Conference closed his splendid address with following words which are as applicable here as in Great Britain:

"If we think realistically about pharmacy we shall find it plays a practical and useful part in modern therapeutics. Above all, the status of a profession depends upon the ability of its practitioners to make good, and for that they must be trained. The only safe way to usefulness is to broaden the base of pharmaceutical training, to create a wider service; then more adequate recognition of our profession will follow as surely as day follows night. The reasonable expectation of the community from our profession is the services we can render in the restoration and maintenance of individual as well as public health."