

EDITORIAL

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PHARMACOGNOSY, TO-DAY AND TO-MORROW.

FLÜCKIGER, speaking of pharmacognosy, has well said that it is "the simultaneous application of various scientific disciplines with the object of acquiring a knowledge of drugs from every point of view." But in the average modern school or college of pharmacy is more than one "scientific discipline" applied or is more than one "point of view" taken in the department of pharmacognosy? In the writer's opinion it can be safely said that 95 per cent. of the purely pharmacognostical training (excluding *Materia Medica*) is devoted to histology and morphology.

True, histology and morphology play an important rôle in the pharmacognosy curricula, and so they should. An intelligent searcher in the pharmaceutical sciences must be qualified to recognize the bast fibers, stone cells, starch grains and all other microscopical elements. Furthermore, he must know the morphological structure of the drugs. It is not the intention to belittle in any way the histological and morphological division of pharmacognosy. The microscope has always been the tool of the pharmacognosist and should always remain his most important one.

In the mad rush after the elusive little starch grain and the cell from whence it came, a phase which is growing daily more and more important is neglected—the chemistry of drugs. It is admitted that the subject receives due consideration in the lectures, but how much laboratory training is devoted to it in the pharmacognosy laboratories?

The chemist has borrowed the microscope and his field of microchemistry is rapidly assuming enormous dimensions. Is not the pharmacognosist justified in borrowing his test-tubes and his reagents?

The chemists of the U. S. P. revision committees have taken over the volatile oils, the fixed oils, the resins, balsams, etc., all of which are vegetable products and rightly belong in the realm of pharmacognosy—the pharmacognosist has, in pursuit of the revelations of his microscope, let them slip away from him. In the U. S. P. VIII there were over two hundred strictly vegetable drugs, that is, drugs consisting purely of plant parts; in the tenth revision there will be less than half that number. What is the significance of this? This is not a criticism of the Committee on Scope; there probably have been good and sufficient reasons for the deletions. But to the pharmacognosist is it not a "handwriting on the wall?"

The life and development of pharmacognosy are more or less dependent on the application of chemical principles. There is hardly anything new to be done along histological lines, while the field of "chemical pharmacognosy"—a term used for the want of a better one—offers great opportunities for the research worker in pharmacognosy. The first move to be made should be the introduction of drug assaying and pharmacopœial testing (as applied to vegetable drugs and the prod-

ucts derived from them) into the pharmacognosy laboratories. This will eventually lead to the more comprehensive field of phytochemistry, which should rightly be considered as a branch of pharmacognosy.

The warning has sounded. There may not be more than ten strictly vegetable drugs in the U. S. P. XII. Flückiger was right, "various scientific disciplines" must be applied, and more than one point of view must be comprehended in pharmacognosy. Surely, pharmacognosy is of importance—it should be preserved!

ELMER H. WIRTH.

NARCOTICS CONSTITUTE A SOCIAL AND MEDICAL PROBLEM.

THAT America is confronted with a narcotic problem of serious proportions in itself and of exceedingly great complexity in its details is emphasized in the first of a series of articles addressed to the public beginning with a preliminary presentation of some of its phases by Sidney Howard in the February number of *Hearst's International Magazine*. To the drug trade and pharmaceutical profession, the article by Mr. Howard contributes but little if anything that has not been reiterated by them on many occasions.

The revelations concerning the prevalence of narcotic drug addiction and illicit traffic in narcotic drugs now being made by Mr. Howard will shock the sensibilities of many citizens, stimulate anew the panacea propagandists represented by the professional reform elements, shake the confidence of illicit traffickers in their apparent security, strike some terror to the political appointees engaged to enforce our laws and regulations affecting lawful traffic in and usage of narcotics.

The article does a very timely and worthy service in pointing out in language plain enough for every one to understand that the appalling narcotic problem of America must be faced. The author discreetly avoids suggesting any means or method of solving it but really asks the American people to recognize the fact that we do have this problem and adds that it is their duty to face it, and they have a responsibility in ascertaining just what the problem is.

There are two complex questions upon which the problem appears to rest: (1) social and (2) medical. Solution seems possible only by clearly determining the exact relations of these two questions, learning just where the one begins and the other ends. Not all cases of addiction result directly from social uses of narcotics as a means of entertainment, the victual of debauching parties, or individual craving to experience the dreams of a Coleridge or De Quincey; likewise not all cases of addiction have their origin in medical treatment of disease. Yet there is abundant evidence tending to show that sooner or later many individual addicts become subjects of medical care, regardless of the manner in which they secured their first supplies. It thus appears that in nearly every case of narcotic addiction there is a point where the ordinary social corrective measures of isolation, commitment and punitive treatment cease to be effective. Again many successful medical cures of narcotic addiction have been undermined when patients have been discharged only to return to an environment rich in the companionship of the pipe, the needle, and the "sniff." The problem therefore cannot be solved until some means are devised whereby (1) the addict needing medical care can be properly treated as an individual patient, and (2) upon discharge from such care

the individual can be kept from an environment conducive to a return of the social custom of dope usage.

Of one thing Mr. Howard seems to be certain, namely, present restrictive legislation and regulation of the legitimate and law-abiding drug trade have not reduced narcotic addiction but have multiplied activity among illicit dealers who have not hesitated to adulterate their wares and profiteer on a weakened and suffering clientele. Pharmacy as a whole has most commendably observed the spirit and letter of existing narcotic control and regulatory laws both state and federal. Pharmacists and the drug trade would do well to heed the thoughts contained in Mr. Howard's article and for the present, at least, withhold action aimed to bring about new laws until there is a more definite knowledge of what the narcotic problem really is. When that becomes known then it will be time to consider further legislative or other means of solving it. Additional legislation either state or federal cannot at the present time correct the condition, and might seriously impede progress looking toward a scientific study of the subject.

C. H. W.

STANDARDIZATION OF PHARMACY SCHOOLS.

THIS comment is not intended to support the idea of standardizing pharmacy schools, nor to oppose the plan ably presented in the Department of the American Conference of Pharmaceutical Faculties. Brief references only will be made to entrance requirements as a basis for classification and to the products of the schools, without touching on the great work in these teaching institutions during the intervening years when the students are prepared for taking part in professional and commercial activities and citizenship in general.

A leading estimate of an institution for teaching pharmacy is, quite naturally, based on the quality of the student body—whether those only are accepted as students who have had the preliminary educational training that will enable them to master and apply the sciences, acquire the technic of pharmacy, and give reasonable assurance that the ideals of pharmacy will be comprehended by them.

If further standardization of schools of pharmacy than that provided for by the American Conference of Pharmaceutical Faculties, and under provisions of State Boards of Pharmacy, is deemed advisable and necessary, conditions and needs should and, doubtless, will receive careful consideration. Under such provisions the demand for certain definite preliminary educational qualifications of entrants would probably be accepted by most of those engaged in teaching pharmacy as one of the readiest and best means for standardizing the schools; the high schools offer the gauge that is reasonably adaptable, even though uniformity in methods and results does not obtain. Time and experience will be required to perfect rules that may be proposed and approved for classifying schools of pharmacy, and general adoption of graduation prerequisite by states will be very helpful, almost essential.

The facilities of schools differ; members of teaching faculties do not all have the same degree of success in communicating knowledge and instructing learners in technic. The first semesters of a pharmacy course must be given to the preparation of students for the practice of pharmacy; the later periods afford opportunities for selective studies and work, and for schools to develop the courses which

they hope will distinguish them—a classification which to some extent affects the question of standardization.

E. G. E.

HEROES OF SCIENCE.

THE French commission endowed by the Carnegie Foundation several years ago awarded gold medals to Doctors Charles Infroit, Adolph Leray and Charles Vaillant. The two former died soon thereafter, as a result of their X-ray research work; the latter had undergone a number of serious surgical operations; when, recently, the grand cross of the French Legion of Honor, the gold medal of the City of Paris, and the Carnegie medal for heroism were pinned on his breast the hero stood with pinned-up sleeves, for both his arms have been amputated. The American Ambassador, Myron T. Herrick, in an address of the occasion, said that Andrew Carnegie had done nothing to meet a truer need than to institute a medal recognizing heroism, but in this case it was a feeble recognition of sacrifice and abnegation. Dr. Vaillant has worked almost without respite for twenty-five years, since which time he has applied himself almost exclusively to the study of Roentgen ray.

Prof. Wilhelm Konrad von Roentgen died in Munich, February 10. He did not attach his name to the ray discovered by him, but named it the "unknown" ray; he had the opportunity of profiting largely by the discovery, but gave a knowledge of it to the world. He was graduated at Zurich, and became professor of physics at Strasbourg, later at Giessen and Würzburg, and finally at Munich. His great discovery was made at Würzburg in 1895. He also was injured in his laboratories, but his sacrificial service was in contributing to science a powerful tool of the physicist, chemist and surgeon—the roentgenologist.

Pasteur replying to a young scientist's complaint said: "The discouragement in your last letter is not worthy of a scientific man." Erwin F. Smith states that the greatest work Pasteur did was that in the 27 years following a paralytic stroke—he gradually recovered, "was able to limp about, undismayed and thrice determined."

So our own Major-General Gorgas might be mentioned, Lazear, Finlay, Agremonde, Reed, etc., and the sacrifices of unknown heroes, unknown as sacrifices of their laboratories and work among the afflicted.

"The world's neglect of its men of science" was the theme of Colonel Sir Ronald Ross before the British Science Guild, February 27. He said: "The genius who saved countless lives in India by discovering methods of inoculation against cholera and plague is not employed by Great Britain in any capacity whatever to-day."

"Walter Reed, the young American who discovered that yellow fever is carried by the mosquito, was given a menial medical job after his discovery that left him in his final illness a prey to harassing anxieties for the future of his family."

The philanthropist is learning that the advancement of medical science confers the greatest and most lasting benefits on man. The heroes of science impress their belief in the value of their service on the world—a more forceful way is impossible. There is a widening field of medical science before us in which medicine, chemistry, and the departments of special and direct concern to pharmacists have great opportunities.

E. G. E.