

and *Matricaria* are excellent representatives of the composite flowers, showing the characteristic ray and disc florets. The akenes of *Arnica* may be used in a study of the pappus which, in this case, consists of multiserrate hairs. If these flowers, as found in the drug store, are soaked in warm water for a few minutes, they are as good as fresh material.

Mullein flowers may be used for a study of adhesion of parts of a flower. This drug consists of the corolla with the stamens adhering to it. The hairs on the inside of this corolla are of the peculiar stellate variety. This flower also shows the peculiarity of having two kinds of stamens, three short, hairy ones and two longer ones with few hairs.

Spanish Saffron may be used in studying stigmas. In Hoarhound and Pennyroyal the persistent calyces are always found and may be used in the study of the calyx. They are quite rigid and easily handled without breaking. Pennyroyal is also of interest because the exterior is thickly dotted with glandular hairs.

Orange flowers as found on our shelves are rigid and the parts not broken up, so that, after soaking for a short time, they form excellent material for the study of flowers.

For representative fruits one does not have to search long among crude drugs. The following list shows what one may find: Cubeb and Pepper are drupes; Malt is a caryopsis; Capsicum and Colocynth are berries; Anise, Caraway, Fennel, Coriander and Parsley are cremocarps; Poppy fruit is a capsule.

For a study of seeds what greater variety could one find than in Pepo, Mustard, Cardamom, Colchicum, Linseed, Myristica, Nux Vomica and Strophanthus.

For a study of digestion in plants, the preparation of malt makes an interesting study. By means of the amyolytic enzyme, diastase, furnished by the seed itself, the insoluble starch is converted into sugar and dextrin. Therefore, the malt contains two medicinal substances, namely, a predigested food and diastase which is an aid to digestion.

Another interesting phenomenon is the formation of the amyolytic enzyme, "Takadiastase," by the growth of the mold *Aspergillus*.

For a study of the microscopic structure of monocotyledon stems we use the drug *Triticum*. For the study of dicotyledon stems we use *Dulcamara*.

ADDRESS BEFORE THE STUDENTS OF PURDUE UNIVERSITY SCHOOL OF PHARMACY.*

W. F. RUDD.**

Thirty years is a long time. It represents in the lives of most men and women about all the time there is for genuinely constructive work. It is longer than you have lived. Those of us who have been in college teaching for such a period have seen thirty groups of young men and women take up their chosen work, complete it or fall by the wayside, and then go out into the world to meet the opportunities and responsibilities of business, home, community, church and state.

Thirty years of such experience and contacts should have given us older men

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ripened judgments, broader sympathies, truer values of men, manners, motives and morals. It also gives most teachers an inordinate tendency to preach too much to the younger generation. I must plead guilty to the latter, although I try to solace myself with the idea that it is not preaching down to my students, but rather the expression of a vital urge to help them in ways that only age and experience can. Some of them hear and heed; others—well, you know. You, your teachers, your school is just such a cross section as is mine or any other college group.

Having thus been a keenly interested observer of thirty groups of freshmen and their subsequent careers, I have tried honestly to evaluate the influences that have been most dominant in shaping these careers. I wonder how you young men with your eyes toward the future would evaluate these factors. I wonder what you think is the most important, the next most important, and so on, step that you will take in life. Answers from this group would make a tremendously interesting study. I suspect that you yourselves would be surprised at your own answers if you saw them in writing. Well, certainly age and youth would not agree on the relative importance of all of these. This is as it should be. Youth and age should not see the world through the same glasses. You must and will live your own lives. A teacher who would have it otherwise is unwise. However, there are manifestly certain fundamentals on which neither the enthusiasm of youth nor the conservatism of age would put a very different valuation. I won't list these. You can do it as well as I can. I leave such observations in your hands. There are, however, a few facts gleaned through the years that I would like to talk to you about.

I am jealous—extremely so—of the good name of pharmacy and of pharmacists. Unfortunately, right now we are the butt of the jokester. We may as well face it just as it is. The pharmacist's activities are so diversified that he just naturally falls in the clutches of fun-makers. This produces a sort of complex that is good neither for the pharmacist nor for the public he serves.

The happy occasion that you students of Purdue are celebrating to-day is the best possible antidote for the harmful influence of this complex. A year or two ago this institution, along with others in your state, came into the full stature of a college course—four years—no less—in pharmacy. Prior to that time you carried the stigma of a short course. The engineer, the dentist and even the veterinarian thought of you as a sort of anachronism in university circles. To-day you come into your new home the equal of any on the campus. These two major events—both within the experience of seniors in your midst—must inevitably beget within every one of you a professional *esprit de corps* that will make you immune to many of the things that have weakened the morale of pharmacists. A consciousness that you are to go out into the world with your training rooted in those same fundamental sciences and cultural subjects that are the bases of all sound education will have a profound influence upon you personally and upon your work in pharmacy. Your house is now builded on a rock—so builded that it will stand the shafts of criticism and the windy words of the wiseacres.

Purdue is showing us the way, and in just two more years the last vestiges of the short courses in pharmacy will have disappeared and with it much that has struck at our very vitals. A new day is just in the offing. Hats off to you of Purdue who have come into your own years ahead of many of us!

There are just two more matters that I venture to discuss with you, and both of them are acutely personal. Pharmacy has accumulated more than its proper share of riff-raff men who are nothing more nor less than pharmaceutical gypsies—working here, there and everywhere, dissipated, unreliable, irresolute, sometimes even a menace. Time alone will slough these old ones off. Is it too much to hope that the new day in educational opportunity for pharmacy will greatly limit the recruits to this unfortunate army that is now such an incubus to our profession? Won't you think well on this?

Earlier in this paper I ventured to ask what single thing would make the most profound impression upon your life. I can't close without asking it again and then suggesting an answer—not dogmatically, but open-mindedly. I doubt that all of you will agree with my conclusion, but aside from my own conviction about it, I had an experience recently that confirmed my rather strong suspicion of what the answer was—one of them, anyway.

In talking to a group of students in a fraternity meeting this same inquiry was raised, and I had the temerity to suggest that, more than they dreamed of, their future was being shaped by the girls they visited, danced with, became engaged to and would finally marry. And then rather boldly I asked them if they had ever really reasoned out deliberately just what sort of girl they would want to bear them their children. Little did I suspect how seriously these young men—seemingly so casual about many things—would take this question. Later, they suggested that it be discussed with the whole class—and it was—with the same general reaction. I pass this on to you for what it is worth. Your mother will tell you that the woman you marry will make or mar you.

Finally, why do I make this the chief topic of this talk to you? I do it because I have seen more failures among professional men from unwise marriages than from any other single cause. Among the advantages which the opportunities of college life and college training give is entrée into homes that many of us would not have otherwise. Your range of choice of friends is multiplied many times because of it. This does two things: *first*, it raises the standard of the type of woman that will meet your own needs as you grow into a life of usefulness and responsibility. *Second*, as an educated man, the world has a right to expect you to contribute wisely and well to the permanency of that most important and sacred of all human institutions—the home and family unit. Of all the choices you must make in life, I trust the choice of the mother of your children will be wisely made.

It is stated that as a result of a conference between Dr. Victor L. Heiser of the Rockefeller Foundation and Mr. Kenzo Adachi, Minister of the Department of Home Affairs, Japan, the latter will undertake to build institutions for the promotion of public health. It is said that the Rockefeller Foundation is in favor of a school for public health in Japan, as established by the Foundation in Poland and Czechoslovakia. The object of this school is to teach students the administration of public health, and the centre is to be the school of medicine; however, it is expected that a course in pharmacy will also be established, for it is impossible to separate pharmacy from medicine. Further conferences and negotiations are necessary before final conclusions are reached.

The record of the investigation of the Foods and Drugs Administration conducted last Spring by the Senate Committee on Agriculture and Forestry, has been printed.

A colorimetric test for ergot alkaloids, written by Maurice I. Smith, senior pharmacologist, Hygienic Laboratory, U. S. Public Health Service is being distributed by the U. S. Treasury Department.