

a "descent of the sun-god," whom they represented, pictorially and sculpturally, under the form of a human being descending head foremost or seated, at rest, within the solar disk; or under the form of different birds or of a jaguar. As in Mexico, when the phenomenon occurs towards the end of the dry season, it heralds the advent of rain generated by the heat of the vertical solar rays and as the growth of vegetation ensued, the ancient Mexican sages began their solar years at the moment when, marking the approach of the rainy season, the sun-god descended upon the gnomons and these cast no shadows.

At the end of my communication to the Sociedad Antonio Alzate in Mexico City I made the suggestion that the ancient observation of the annual phenomenon, which marked the beginning of the Aztec New Year and is always allowed to pass by unobserved and unmentioned by the present inhabitants of the capital, be revived as a national school festival, which would be of educational and patriotic value as it would link the present with the past generations of native Mexicans. My suggestion was received with enthusiasm by the president and members of the society and on May 18 the impressive phenomenon was observed in several schools in Mexico City, the most important celebration being held in the great courtyard of the new normal school under the auspices of its directors, Señor Aguirre and Señora Berlanga; of Señor Gallo, the director of the Astronomical Observatory, and of Señor Heliadoro del Valle, who, with other eminent professors, initiated a celebration in which over six thousand pupils took part with song and dance. The hope I also expressed that this beautiful nature festival will likewise be revived in other anciently inhabited centers within the tropical zone bids fair to be realized next year, as official representatives of Peru and Guatemala have already expressed their intention to recommend the adoption of the same school festival in their countries, and it is probable that others will follow suit.

I am at present engaged in preparing for publication a book containing the complete presentation of the results of my researches on the subject which have extended over thirty years.

ZELIA NUTTALL

CASA ALVARADO,
COYOACAN D. F.,
MEXICO

QUOTATIONS

"YOUR MONEY'S WORTH"

No one group has done more to "debunk" the commercial practices of those dealing in the special mer-

chandise of the group than has the medical profession. Furniture dealers are by no means agreed that it is in the public interest to let it be generally known that a table made of birchwood with a thin veneer of mahogany is not the "solid mahogany" of the advertisement; the gentlemen in "suits and cloaks" are far from agreeing that there is any moral defection in describing a garment of cotton and shoddy as "all-wool"; furriers still act on the principle that it is permissible to unload dyed muskrat on the public as "Hudson seal"; the manufacturers of a well-known brand of soap admit privately that the slogan "99 and 44/100% pure" is a slogan rather than a fact. But, for over twenty years, the organized medical profession has attempted to bring to a minimum misrepresentation and deceit in the exploitation of medicinal products. Physicians, then, as a class, will probably be more interested than any other one group in the book recently published under the title "Your Money's Worth," by Stuart Chase and F. J. Schlink. Neither of the authors is a physician, but both of them have been trained to clear thinking and, what is equally evident from their book, to a lucid expression of facts. Mr. Chase, for some years on the staff of the Federal Trade Commission and at present a director of the Labor Bureau, Incorporated, is by profession a certified public accountant. Mr. Schlink, a mechanical engineer-physicist and an officer of the American Engineering Standards Committee, is fortified by an experience he had of some years on the staff of the National Bureau of Standards at Washington. "Your Money's Worth" appeared originally as a series of magazine articles, under the title "Consumers in Wonderland." The book deals not so much with adulteration of products and deceptive advertising as outstanding evils of modern merchandising as with the wastefulness of selling what are practically identical articles under various brand names and with the absence of impartial information available to the public. In a few of the industrial fields, the public is protected in its purchases by standardization worked out by the industry itself, but the ground thus covered is pitifully small. Medicine, however, has reason to feel proud of the fact that it was among the first, both in point of time and of importance, in establishing agencies whereby the public, through the profession, could be protected. In speaking of this phase of the problem, discussed by Messrs. Chase and Schlink, they say:

Far and away the leader among the technical societies from the point of view we are considering is the American Medical Association. It is as fearless as it is explicit in the exposure of quackery. Its Council on Pharmacy and

Chemistry and its Bureau of Investigation are continuously busy in the public interest. It has haled untold rascals before the bar of public opinion; broken up hundreds of shell games.

We unreservedly recommend "Your Money's Worth" as a book that is not only readable and teeming with facts, but as one that will appeal to the physician, both in his professional capacity and also as one of the great army of ultimate consumers of modern merchandise.—*The Journal of the American Medical Association*.

SCIENTIFIC APPARATUS AND LABORATORY METHODS

PRE-STAINING IN BOTANICAL MICRO- TECHNIQUE. THE ALCOHOL-XYLOL- SAFRANIN METHOD

A FEW years ago the writer had occasion to imbed some small botanical objects in which it was important to section accurately with respect to the median axis. On clearing in xylol, the material became quite transparent, as so frequently happens, making it almost impossible to see the pieces in the paraffin block, much less to orient the material correctly for cutting. In the ribbon it was again difficult to find the small sections or to ascertain if the material was at all suitable for mounting and staining. The difficulties just enumerated are familiar to all technicians, whether small or large objects are dealt with and, as a result, much valuable time is lost, materials are ruined and the finished product is often thrown into the discard. The writer had read somewhere that it was possible to stain materials in bulk to render them more conspicuous, but details were lacking. Probably it was thought to be altogether too simple a procedure to require further elucidation. Inquiries put to several technicians did not elicit much definite information. This is not surprising, since few workers seem to be aware of the many advantages of pre-staining in micro-technique.

A method of pre-staining was devised which was so generally successful with all kinds of materials and which required so little extra effort that all subsequent imbedding has been done in this way. Not only are imbedding and cutting facilitated, but permanent mounts are also possible without extra labor. The plant parts are killed and fixed in the favorite fluid, and washing, hardening and dehydrating follow in the ordinary way. The clearing is done in alcohol-xylol mixtures, a series of 5, 10, 30, 50, 75 and 100 per cent. xylol in absolute alcohol being generally employed. The stain mixture is inserted in the series in place of the 75 per cent. alcohol-xylol. It is prepared as follows: safranin is dis-

solved in absolute alcohol to make a saturated solution; 100 parts of the alcoholic safranin are mixed with 300 parts pure xylol. Some of the stain will precipitate out, and the mixture may be filtered, although this is not absolutely necessary. The material is run up through the lower percentages of xylol in alcohol through the 50 per cent. mixture and is then put directly into the safranin mixture, where it is left for 24 hours or longer, depending upon the size and quantity of the material to be stained. It will be seen that the material assumes a deep red color, the fluid at the same time becoming somewhat clear. If much material is to be stained, the original solution may be replaced with fresh stain mixture. There is no danger of over-staining. From the stain mixture the material is run through pure xylol. This will bring down additional safranin as a precipitate, which may be removed by an extra washing with xylol. Embedding proceeds in the regular way. This becomes an easy task, even with small objects, and the pieces are easily seen in the paraffin block. Cutting is facilitated, and in the ribbon the sections stand out clearly. The ribbon may be examined under the microscope and surplus and useless sections may be eliminated with certainty at once. Mounting is done with a minimum of albumen fixative, using no more water than is necessary to smooth out the sections. Any excess water is immediately drained off and the slides are thoroughly dried with gentle heat. Twenty-four hours are not too long a time for drying, and an incubator is best used to eliminate dust and to guard against melting the paraffin. The slides may then be finished. The paraffin is removed with xylol in the ordinary way. At this stage they may be examined under the microscope. The sections will be found to be beautifully stained, and every detail will stand out against a perfectly clear background. A second elimination of unfit material may be made at this time with great certainty, and the only precaution necessary is to keep the slide wet with xylol during the period of examination. The slides may then be finished up by applying balsam and a cover-glass; or they may be run down through the alcohol series, which removes the stain, and any other staining method pursued.

It will thus be seen that this gives a method by which permanent mounts may be made quickly and easily. It is often desirable to make such preparations for temporary class use, and workers in certain fields will find the method adapted to many uses. Mounts thus made have been kept for months without apparent deterioration, the success being apparently determined by the elimination of all sources of water. If a safranin soluble only in alcohol were