

tension of the past few years, which may account in part for the condition of which I have just spoken. Financially, industrially, politically, socially we are being driven by shifting winds and carried by changing currents. Shipwreck may be avoided, but clear thinking, cool judging, wise acting must be the pilots at the wheel.

Once more, we must conserve our spiritual ideals and attainments. This is no time for narrowness of outlook. If ever there was a time when broadness of vision was demanded it is to-day. I wonder if you realize to what extent intolerance, the backward look, narrow minded conservativeness are dominating or attempting to dominate the spiritual life of the day. This too, doubtless, is a passing wave, a manifestation of the reaction which is affecting other aspects of life. But its tendencies are dangerous. They are destructive rather than constructive. They tend to shut men out from the higher realms of spiritual life and thought rather than to welcome them and to incite them to the greatest attainment. The founders of our faith and the builders of our nation were men and women whose heads were set forward on their shoulders, not backward. They advanced into the unknown and made of it a patrimony for those who followed them. They held fast the freedom they had obtained and persistently aspired for more. Had it not been so, picture to yourselves, if you please, the history of the past three hundred years. If we abate the struggle or lose the winnings they have made, picture for yourselves again, if you please, the history of the future. Broad-mindedness, altruism, charity, faith, compounded with intelligence and a rational appreciation of the temper and needs of the time, these must be components in the lives of the men and women of to-day who are to shape the destinies of to-morrow.

I have attempted very briefly to summarize some of our resources, the dangers of their abuse and our obligation for their careful utilization. I have also tried to make clear our debt to the future, in the necessity of preserving to posterity as much as possible of the splendid gifts which we have received from a bountiful Creator. I have given you an impressionistic sketch rather than a detailed por-

trait. I am not a prophet of disaster and I fully believe that as new emergencies arise they will be met by new resources. But I do believe that the duty is laid heavily on each of us to do what in us lies to avert or at least to postpone these emergencies and by living hopefully, bravely, carefully and with our faces toward the light of the future, to conserve every resource, material and spiritual, that may contribute to an aspiring and inspiring life.

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THE PRESENT SUPPLY OF BIOLOGICAL STAINS

As many requests have been received for information as to where stains can be obtained at present it seems well to publish a brief note listing the various manufacturers and dealers in this line at present.

Frequent inquiries are made concerning Grüber's stains. In this connection it can be said that there are at present on the market some stains of undoubted Grüber origin and others that are reputed to come from this source. There will undoubtedly be longer lists of Grüber's stains to be obtained as soon as it is easier to import them than at present; but as all of the recent investigations on stains point to the equal quality if not superiority of the American stains, there is no need of looking specially for the reintroduction of the German products. For this reason the domestic market conditions are most important at present. To understand these conditions it must be remembered that there are three different classes of concerns to deal with in this matter: (1) the basic manufacturers, (2) the specialists in biological stains and closely related chemicals, and (3) the dealers in general laboratory supplies.

The basic dye manufacturers are of little concern to the biologists, with two exceptions. These two are:

Calco Chemical Co., 136 Liberty Street, New York City.

National Aniline and Chemical Co., 40 Rector Street, New York City.

Both of these have departments that prepare

special dyes for biological purposes. The National Aniline Company puts out an especially long list, so much so that this department of the company deserves to be considered with the specialists in biological stains to be mentioned below. Three other basic manufacturers—Dicks, David and Co., Varick and N. Moore Streets; Heller and Merz, 505 Hudson Street, New York City; McAndrews and Forbes, Camden, New Jersey—have shown a great deal of interest in the work and put on the market certain products that deserve to rank with the biological dyes and are handled by all the concerns mentioned below.

The specialists in biological stains either manufacture their products from the intermediates or else, whenever they know of a good source of some dye, buy it of the basic manufacturers and see that it comes up to their tests. This was and probably still is the function of Grüber and Holburn in Germany. The domestic concerns falling in this list that are at present in the business are:

Coleman and Bell, Norwood, Ohio.

Empire Biochemical Co., 920 Whitlock Avenue, New York City.

Harmer Laboratories, Lansdowne, Pa.

D. H. Pond, Blackstone Bldg., Cleveland, Ohio.

Providence Chemical Co., Providence, R. I.

as well as the Pharmaceutical Division of the National Aniline and Chemical Company, as mentioned above.

The last mentioned concern needs a further word of explanation because of a certain misunderstanding that is prevalent. In some of the earlier tests made by a committee of the Bacteriological Society, National Aniline products were listed, and they rank rather unfavorably. These, however, were the textile dyes, the only ones then sold by this company. The company has since then decided to specialize in biological stains and their present line of stains is entirely different from those mentioned in the earlier report. Another misunderstanding comes from the fact that when the Heyl laboratories failed, Dr. Heyl entered the employ of the National Aniline and Chemical Co., and the latter concern began marketing biological stains. This naturally gave rise

to the impression that the National Aniline Co. has taken over the Heyl Laboratories. Such is not the case, however, and the National Aniline line is distinctly different from those previously marketed by the Heyl Laboratories.

The third class of firms mentioned above needs very little mention here because they are quite well known to the biologist. Some of these laboratory supply houses like Central Scientific Co., A. H. Thomas Co., and E. Leitz Co. buy some one line of stains from the specialists in that line and advertise this fact; others buy dyes from the basic manufacturers and sell them as stains under their own name. Among the latter the Will Corporation deserves special mention because in the past they have manufactured stains where necessary and have standardized those that they have bought exactly as done by the specialists listed above. They are at present, however, stopping the manufacture of these products, now that satisfactory American stains are readily obtainable.

This article is published in the hope that it will assist users of stains in understanding the market and buying intelligently. All the concerns mentioned as dealing particularly in this line of business have given the committee hearty cooperation and are doing their best to market a satisfactory line of stains.

H. J. CONN, *Chairman*
COMMISSION ON STANDARDIZATION OF
BIOLOGICAL STAINS

LOWERY LAYMON LEWIS

THE death of Dr. Lowery Laymon Lewis, of the Oklahoma Agricultural and Mechanical College and Experiment Station, on September 26, has taken from the institution and the educational circles of the state a faithful worker and scientist whose loss will be keenly felt.

Dr. Lewis was born at Newport, Tennessee, on September 3, 1869. He received the B.S. degree at the Texas Agricultural and Mechanical College in 1893, and the M.S. in 1894 from the same institution. His studies were continued at the Iowa State College and in 1896 was granted the degree of D.V.M. During that year he came to the Oklahoma Agricul-