

and vessels. It may further be pointed out that no real progress was made in the study of the development of starch grains until Meyer began at the morphological end and proved that the layering was not due to any recondite physical or chemical causes as previously asserted, but rather to alternations of night and day. Such examples could be multiplied indefinitely.

It is an interesting feature of the study of religions that converts are always the most bitter assailants of the views they once held. Extremely good illustrations of this principle can be supplied from the ranks of the morphologists, who in recent years by reason of faith or expediency have turned to physiology or genetics. The set of the biological tide has however again turned towards morphology and in the near future we are likely to have abstruse problems, both genetical and physiological, receive needed light from this quarter. Nor has the fundamental biological study of the origin of species passed, as was predicted years ago, from the field to the laboratory. The field is still much more important. Experiments *in vitro*, whether in glassware or greenhouses, need to be interpreted in the clearer atmosphere of the world outside. This situation was doubtless in Professor Conklin's mind when he recently called attention to the relatively slight evolutionary results, flowing from the huge experimental activities of the past twenty years.

E. C. JEFFREY

COLORED HEARING

THE following incident seems to have several points of interest:

FULTON (aged three years, 11 months, listening to the phonograph): "Daddy, I think soft music is yellow."

DR. P. (his father, a distinguished chemist): "Yellow? And what color is loud music?"

FULTON: "Well, it is black."

DR. P.: "And what is blue music like?"

FULTON: "Blue music is loud, but not so loud as black music."

DR. P.: "Tell me, why is soft music yellow?"

FULTON (after thinking a moment): "Well, when you mark with yellow crayon on paper, you can't see it very well, but when you mark with black, you can."

Dr. P. had read an article in *SCIENCE* about

colored hearing and explains his interest in his son's remark by the fact that it seemed to suggest a possible hypothesis as to the origin of such phenomena. The first point to notice, therefore, seems to be that there is a distinct value in such a journal as *SCIENCE* with its appeal to scientific men of all complexions.

For there are certain regions in which the psychologist as well as the biologist is in much the position of the astronomer, of having to wait for phenomena to occur under non-experimental conditions. Even if colored hearing could be experimentally induced, we should have little guarantee that it is the same as that "normally" possessed by many persons. It would be unduly tedious for psychology to have to wait for such evidence to be collected solely by psychologists from the observation of their own children, even were they as a class far more fecund than is the case.

The suggestion of the incident is, of course, that such associations between sounds and colors might be gradually strengthened while the connecting link dropped out of sight. Dr. P. is carefully avoiding any suggestion to the child and, at a later date, an attempt will be made to see whether the association has developed or has disappeared.

Have other readers of *SCIENCE* relevant observations?

HORACE B. ENGLISH

ANTIOCH COLLEGE

ACETONE IN TISSUE WORK

I WAS much interested in Professor F. M. McFarland's note (*SCIENCE*, July 14, 1922) on the use of acetone in place of alcohol in preparing paraffin sections for microscopic examination. Essentially the same method has been used in the laboratory of the *CLINIC* for about two years. Merck's acetone, U.S.P., is used. The steps in staining the slides are passing them through a series of Coplin jars as follows: two of xylene, two of acetone, one of water, one of hematoxylin, one of distilled water, one of tap water, one of acetone, one of acetone saturated with eosin, and two of xylene. The results appear quite as satisfactory as when alcohol is used in passing to and from water. State and federal regulations and restrictions for obtaining alcohol together with the high internal revenue tax make its use