through the different grades of intersexes to a male, or, vice versa, from a male to the female, is characterized by a definite intermediate step of wing-pigmentation. The color of the pigment is constant but its quantity is variable. And one sees at first sight that in the different intersexes a certain amount of pigment-producing oxydase, parallel to the quantitative behavior of the sex factors, is furnished by the veins, varying from 0 per cent. in the female to 100 per cent. in the male. If a male is becoming intersexual, white cunei appear between the veins on the brown wing. Their position and shape is irregular. The total unpigmented area in different animals of the same constitution, is, however, approximately the same. With growing intersexuality—as measured by all organs of the animal—the white spots become larger. And an inspection of the wings shows immediately that there must be present an amount of pigment or, more correctly, of oxydase, quantitatively fixed, and corresponding to the quantitative value of $m - f$; and that the given quantity (or concentration) flows out from the veins over the wing, producing brown scales, wherever it happens to come. With increasing inter-sexuality the phenomenon becomes still clearer. A stage is reached, where a white wing shows brown, pigmented venation; in some places a short stream of pigment seems to flow out from a vein. In still more advanced intersexual males, about two thirds transformed into females, only a few pigment spots and stripes are to be found on the wings along the veins. In the female intersexes the opposite process is observed, but the details are somewhat different, showing that these depend upon the genetically given wing structure, different in both sexes.

It seems that this case is an exceedingly clear one, demonstrating the principle ad oculos. But it may be of even greater significance. All organs different in the two sexes are affected in some way by the intersexuality. There is some hope that it might be possible to obtain by their analysis a similar insight in the process of growth, localization, symmetry, etc., involved in morphogenesis. But I think that it is already clear from the foregoing remarks, that we are right, when we reached, independently, the conclusion that the hereditary factor is a determiner for a given mass of ferments; and we can demonstrate it by the fact that a quantitative difference in the potency of hereditary factors causes a parallel, quantitatively different, enzyme production.

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December, 1915

EARLY MEETINGS OF THE AMERICAN ASSOCIATION FOR THE ADVANCEMENT OF SCIENCE

To the Editor of Science: I am greatly interested in statistics published in your issue of December 3, in regard to the oldest members of the American Association for the Advancement of Science.

While my own membership dates only from 1870, my knowledge of and interest in the association far antedates that year. It seems almost certain that I have known the association by attending its meetings longer than any other person now living.

In 1851, Professor James H. Coffin, of Lafayette College, was a guest at our home in Albany and took me to the meeting in the old capitol.

Again in 1856 he was our guest. I was then a pupil at the Albany Academy, a building of historic interest as the place where Joseph Henry installed the first telegraph. One of the sessions of the association was held in the academy park, at which the Dudley Observatory was dedicated. I well remember the delight with which we watched Professor Agassiz draw figures with both hands while he talked; also the eloquent address of Edward Everett.

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40 First Place, Brooklyn, N. Y.

SCIENTIFIC BOOKS

The Alligator and Its Allies. By Albert M. Reese, Ph.D., Professor of Zoology in West Virginia University. New York, G. P. Putnam's Sons, 1915. Pp. xi + 342. 62 figures and 28 plates.