

of certain pigments, but in other respects they may be as potent as before. The albino does not produce pigment, but there may be other substances in the place of pigment that would distinguish the albino as a positive variation when judged by other standards. The animals whose gametic formulas contain a number of small letters are not necessarily more imperfect or perhaps I should say incomplete than their congeners which carry a large number of dominant characters.

Of course there may be varieties due to losses of germinal material. Considering the complex mechanism of mitosis, and the opportunities afforded for the loss of chromatin during this process, such variations are not improbable *a priori*. But there is not the slightest warrant in the fact of recessiveness *per se* for the doctrine that all recessive variations are produced by this method. The origin of so-called unit characters may depend, for the most part, not upon germinal loss or gain, but simply on transformation. Viewed in this simple and natural way the appearance of a new dominant character is not an event to be marvelled at. Dominant and recessive characters not improbably owe their origin to much the same causes. At least we do not know that they do not. Concerning the real causes of variations of any kind we know very little more than we did when Darwin commented on our profound ignorance of this subject. It is therefore premature to pin our faith to any particular theory of the origin of variation and especially to draw far-reaching conclusions regarding evolution on the basis of such an interpretation. We may conceive variability as due to germinal losses or gains for the sake of our formulas, and there may be little harm in so doing so long as it is clearly realized that the procedure is a purely arbitrary and schematic method of recording certain facts of inheritance. But when we make the serious attempt to apply the conception to what actually takes place in the germ plasm we encounter a fruitful source of fallacies.

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ERNST GRIMSEHL¹

ON October 30, 1914, Ernst Grimsehl fell near Langemarck in the bitter fighting along the Yser line. Only two days before he had received the iron cross. Although he was in his fifty-fourth year, yet he responded voluntarily and full of enthusiasm to the call to the colors as an "Oberleutnant der Landwehr." On October 1 he marched with the 213th regiment across the Belgian frontier. For only a few weeks was he permitted to fight for his country which he so dearly loved. He died, as so many others at his side, without living to see the victory which he so confidently hoped for.

In his death the German educational system loses a personality which was unique in its character and therefore can not be replaced. All his thoughts and efforts were directed to this ideal of placing physics teaching on a firmer basis and of bringing it nearer and nearer to perfection. His friend, A. Keferstein, has in the *Unterrichtsflättern* sketched the character of his work with beauty and conviction. He says in part:

His preeminent manual dexterity and his thorough knowledge of the instrument-maker's art, which as a student he had gained in his vacation days from the masters of the art, qualified him for the creation of clean-cut models of apparatus. These he tried out at every point till he had corrected by his masterly hand their first faults and made them respond to his every wish.

Of his original inventive skill as an experimenter, numerous publications bear witness; one must have watched him getting ready for an experimental lecture such as he was wont to give almost every year at the spring meeting of the Association for the Promotion of Instruction in Mathematics and the Natural Sciences, in order to gain the secret of this skill. He was tireless and enthusiastic in his efforts to perfect his arrangements, often by hours of labor in a strange place and in a

¹ Translated from *Zeitschrift für den Physikalischen und Chemischen Unterricht*, January, 1915, and read at the seventieth meeting of the Eastern Association of Physics Teachers by N. Henry Black.

strange laboratory, so that he might manage things there just as in his own rooms. Everything must be carefully tested before he began his lecture. So it came about that his demonstrations became the star performances and attractions of each of these meetings.

It is difficult to enumerate all the pieces of apparatus for purposes of instruction and investigation which we owe to him. These are almost all published in our magazine, in which he took a lasting interest. Even the first volume in 1888 contained a report of his paper in which he published a new method of measuring the intensity of a tone. In the second volume there appeared the first original investigation from his hand, in which he described two pieces of apparatus for detecting the nodal points and internodes in a sounding column of air. His last lecture, which he gave in the spring of 1914 upon a new and simple means of showing the interference of light, he had also intended for our magazine. However, before he came to write it down, the war had pressed into his hand the sword instead of the pen.

Of his books only two may be mentioned here: the large "*Lehrbuch der Physik*"² which has in five years gone through three editions and the "*Didaktik und Methodik der Physik*"³ (a part of Baumeister's Handbook) which in spite of its brevity and its strong personal color, is rich in valuable advice and fruitful ideas.

Death has brought his work to an untimely end, but the influence of this creative work will live after him and will assure for him a grateful memory among his followers as well as in the history of the teaching of physics.

SCIENTIFIC NOTES AND NEWS

DR. PAUL EHRLICH, the distinguished German pathologist, director of the Royal Institute for Experimental Therapeutics in Frankfurt a. Main, died on August 20, at the age of sixty-one years.

² B. G. Teubner, Leipzig.

³ C. H. Beck'sche "Verlagsbuchhandlung," München.

DR. CARLOS J. FINLAY, a leading physician of Cuba, known for his advocacy of the theory that yellow fever is transmitted by mosquitoes, died on August 20, at the age of eighty-two years.

It is announced that in consequence of the war, the meeting of the Australasian Association for the Advancement of Science, which had been arranged to take place in Hobart in January next, has been postponed for a year.

DR. DAVID BANCROFT JOHNSON, president of Winthrop Normal and Industrial College, of Rockhill, S. C., has been elected president of the National Education Association, in succession to Dr. David Starr Jordan, chancellor of Stanford University.

DURING the San Francisco meetings of the American Association for the Advancement of Science, there was formed a Pacific Coast Branch of the American Society of Zoologists. The officers elected at this meeting were:

President: V. L. Kellogg, Stanford University.

Vice-president: R. M. Yerkes, Santa Barbara.

Secretary and Treasurer: Joseph Grinnell, University of California.

Executive Committee: C. O. Esterly, Occidental College; Barton W. Evermann, California Academy of Sciences; Charles L. Edwards, Los Angeles; J. Frank Daniel, University of California; Harold Heath, Stanford University.

AT the same meeting there was formed a Pacific Coast Branch of the American Society of Naturalists with the following organization:

President: Barton W. Evermann, California Academy of Sciences.

Vice-president: John F. Bovard, University of Oregon.

Secretary: Ellis Leroy Michael, Scripps Institute for Research.

Treasurer: L. L. Burlingame, Stanford University.

Executive Committee: Trevor Kincaid, University of Washington; Harry Beal Torrey, Reed College; Frank M. McFarland, Stanford University.

The society will take the place of the local biological societies of the Pacific Coast.

THE Biological Society of the Pacific met at the Hotel Sutter, San Francisco, on August 4, for its annual meeting. The ad-