Thirteen plants examined fall into three groups, as follows:

(*a*) Stems and midribs of leaves dark crimson; buds entirely green. Three.

(*b*) Light green stems, slightly speckled or washed with reddish; midribs light green; calyces broadly striped with red, as de Vries[2] figures for *Œ. hookeri.* Six.

(*c*) Red stems and mid-ribs, and red-striped buds. Four.

Thus there is rather absence of correlation than negative correlation, except that no green-stemmed plants with green buds were found.

Mr. H. H. Bartlett, who grew *Œ. hewetti* from my seed in 1914, found the plants diverse, and mostly self-sterile, which led him to suggest (in litt.) that the form might be of hybrid origin. My plants seem quite uniform except in color, as described above, and in the size of the flowers, which seems to vary largely according to the condition of the plant, or on the same plant according to position.[3] No other *Œnothera* was observed in the original locality of *hewetti,* and the only species growing in the vicinity at Boulder (until last summer, when I had a single small plant of *Œ. rubricalyx*) is *Œ. cockerelli* Bartl., one of the small-flowered group. It seems probable that *Œ. hewetti* is a pure species, which varies or mutates in the same manner as other members of the genus.

I have this year a very fine plant of *Œ. rubricalyx,* which is even redder than Gates's original figure,[4] having the buds, including the hypanthium, entirely dark red, excepting the green sepal tips. The stems are dark red, more or less streaked with green, but the midribs are green, only faintly speckled with red. Thus this intensely pigmented plant has the midribs much less pigmented than in the red-stemmed form of *hewetti,* although the buds are very much more intensely pigmented than in the latter.

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UNIVERSITY OF COLORADO,
July 18, 1915

[2] "Gruppenweise Artbildung," pl. VIII.

[3] This refers to the grown plants. Some diversity in the rosette leaves was noted.

[4] *Zeits. f. indukt. Abstammungs-u. Vererbungslehre,* Bd. 4, pl. 6, f. 8.

QUOTATIONS

THE CONVOCATION-WEEK MEETINGS OF SCIENTIFIC SOCIETIES

THE scientific men of the country will hold their annual meetings this year at widely separated places and with some conflict. The American Association for the Advancement of Science is responsible for the arrangement of the convocation-week meetings, having fourteen years ago transferred its own meeting from mid-summer to the Christmas holidays. At the same time it obtained from many universities and colleges an extension of the Christmas holidays or grants for leave of absence, so that the week in which New Year's day falls should be free for these meetings. The American Association arranges also for the meetings of affiliated scientific societies which may wish to meet in conjunction with it. It is not expected that all these societies will meet every year with the association, for there are obvious advantages in the isolation of a single society or a small group concerned with related subjects, as well as in a large congress covering all the sciences and numbering its attendance by the thousands.

In order to meet the complicated conditions as well as may be, the American Association has planned a program, according to which once in four years there shall be a great convocation-week meeting representing all the natural and exact sciences, and perhaps, ultimately, also engineering, education, economics, history, philology, literature and art. Such a demonstration of the intellectual forces of the country should be a stimulus to those who join in it and an exhibition that would impress the whole country. It is proposed to hold these meetings once in four years and in succession in New York, Chicago and Washington. The first will take place in New York at the end of the year 1916, and thereafter they will he held in the four-year periods at which the national presidential elections occur. In the intervening two-year periods the meetings will also be in large scientific centers, and it is expected that most of the national scientific societies will take part. The first of these meetings was held in Philadelphia, and the next will probably be held in Boston at the

end of the year 1918. In the intervening years the American Association will meet at places more remote from the large centers of scientific population, or in cities or at universities where the accommodations are more limited. The first of these meetings was in Atlanta at the end of the year 1913, and the meeting this year is at the Ohio State University, Columbus. In 1917, it will probably be in Toronto, Nashville or Pittsburgh.

At these meetings the attendance of scientific men is in the neighborhood of a thousand; at the larger meetings it may be two or three thousand, and at the four-year periods, from five to ten thousand. The vast extent of the country makes it difficult for the scientific men of the west to visit the east, and conversely, during the Christmas holidays, and summer meetings may be held in the west once in four years, the first having been held this summer in connection with the Panama-Pacific Exhibition, and on the occasion of the organization of a Pacific Division of the Association.

Although the meeting of the American Association opening at Columbus, on December 27, is not one of the larger convocation-week meetings, it promises to be of more than usual interest to those who are able to be present, as was the case with the meeting held at the Ohio State University some fifteen years ago. The address of the retiring president, Dr. Charles W. Eliot, who, called from a chair of chemistry to the presidency of Harvard University, has become by common consent our leader in education, is on "The Fruits, Prospects and Lessons of Recent Biological Science." An introductory address will be made by the incoming president, Dr. W. W. Campbell, the distinguished director of the Lick Observatory. Among the vice-presidential addresses before the eleven sections of the association may be noted important subjects, treated by Professor White, of Vassar College, in mathematics; Professor Zeleny, of Yale University, in physics; Professor Lillie, of the University of Chicago, in zoology; Professor Pearce, of the University of Pennsylvania, in pathology; Professor Hanus, of Harvard University, in education, and Dr. Bailey, formerly director of the Cornell Agricultural College, in agriculture.

Eighteen national societies, including the American Society of Naturalists, and the societies devoted to mathematics, physics, zoology, entomology and botany meet at Columbus in affiliation with the American Association. The chemists do not hold a winter meeting this year. The psychologists and pharmacologists meet in Boston; the anatomists in New Haven; the psychologists in Chicago; the philosophers in Philadelphia; the geologists, paleontologists, geographers, anthropologists, sociologists and economists in Washington.

The serious conflict of the year is with the Second Pan-American Scientific Congress meeting in Washington from December 27 to January 8. It was originally planned that this congress should meet in the autumn, but the date was changed and the preliminary arrangements were made without consultation with American scientific men. The officers of the congress, selected presumably by the department of state, are Mr. Phillips, the third assistant secretary of state, chairman of the executive committee; Mr. Scott, secretary of the Carnegie Endowment for International Peace, vice-chairman; Mr. John Barrett, secretary-general; and Mr. Glen L. Swiggett, assistant secretary-general. The department of state is probably as ignorant of the scientific conditions of the country as the navy department, whose secretary when asked why he had ignored the National Academy, by law the scientific adviser of the government, and the American Association, the great democratic body of scientific men, in selecting the societies to elect members of the Naval Advisory Board, appeared never to have heard of either association. A program in nine sections has been arranged for a "scientific" congress, which ignores mathematics, physics, pure chemistry, geology, zoology, botany and psychology.

However, attempts have been made to rectify the earlier errors. Dr. Welch, president of the National Academy of Sciences, has been made honorary vice-chairman, and Surgeon-General

Gorgas, Dr. Holmes and Dr. Woodward have been added to the executive committee. The conflict in time does not extend to the second week of the Pan-American Congress, and it is probable that after the adjournment of the Columbus meeting a special meeting of the American Association will be held at Washington. Under existing conditions, it is extremely desirable that friendly relations and cooperation in science should be maintained among the American republics.—*The Scientific Monthly.*

SCIENTIFIC BOOKS

Elemente der exakten Erblichkeit mit Grundzügen der biologischen Variationsstatistik. By W. JOHANNSEN. Zweite deutsche, neue bearbeitet und sehr erweiterte Ausgabe. Jena, G. Fischer. 1913. 724 pp.; 35 figs. in text.

The second edition of Johannsen's epoch-making work which follows the first by only four years has added nearly 200 pages, or 40 per cent., to the first edition. The number of lectures has been increased from 25 to 30, by the division of one to which much material has been added, by wholly new lectures (Nos. 12, 13) and by five final lectures instead of three.

The significance of Johannsen's book can now, after the lapse of years, be better evaluated than before. It had long been a truism in biology that the hereditary substance—the stirp or germ—must be carefully distinguished from the person or soma, and Galton was one of the earliest to make this distinction. It was, therefore, a great step backward when Galton announced his law of ancestral heredity according to which an individual inherits from his two parents together 50 per cent. of his whole heritage; from his four grandparents 25 per cent., and so on. It only testifies to the depth of the darkness in which we were groping that any of us should have seized upon *that* as a solution of the mystery of heredity.

The rediscovery of Mendel's law wiped away that fog and brought us again to germ cells. Still we did not fully sense the bearings of that law. We still clung fondly to the idea that the soma was so important an index to the hidden germ plasm that we could make progress by somatic *selection.* And it required the first edition of Johannsen's "Elemente" to set us straight there. Ever since we have recognized that even if one can make progress by somatic selection it is more or less by accident and by rule-of-thumb. For what we are selecting is truly the germ plasm, even though we think we are selecting somas; and we are successful only in those cases in which there happens to be a considerable correlation between the two. Ever since Johannsen's book appeared somatic selection merely—as such—has been realized to be futile for evolution, although somatic selection as a means of eliminating or preserving certain kinds of germ plasm may be, and in some cases is, of great theoretical and practical importance.

In the new edition, new, original experimental material on pure lines in beans is afforded with results quite the same as before. More space is given to a critical examination of the later studies on selection such as the favorable ones of Jennings, East, Pearl, Tower and Gates and the unfavorable ones of Castle, Lutz and Harris among American investigators. The unfavorable investigators Johannsen finds to fall into two groups; those whose experiments have yielded results opposed to Johannsen's and those who, without contradicting his results, have opposed their general validity. The opposing experiments rest either on the fact that the original material was not homogeneous or result from a "secondary selection" such as the selection of the best nourished individuals whose young start life in each generation on a higher nutrition-plane even though no genotypic change has occurred. There seems to the reviewer a certain weakness in the author's explanation of the discordant results of some workers (*e. g.,* Lutz). It would seem more probable that some of the favorable results of selection are due to unexpectedly abundant mutation. The last 90 pages of the book contain the most new material. Here are recorded, with evidence of great research into the literature, the results of the newer experiments in hered-