ates of all departments of the university. All of the engineering courses maintained by the state, with the exception of the course in mining engineering in the School of Mines at Butte, will be concentrated in the college at Bozeman. Dean A. W. Richter was transferred to Bozeman and becomes dean of engineering. Assistant Professors Wm. R. Plew and Philip S. Biegler were also transferred and added to the faculties of civil and electrical engineering, respectively.

Dr. Andrew Howard Ryan, for three years past instructor in physiology and pharmacology in the University of Pittsburgh, has accepted the chair of physiology in the medical department of the University of Alabama. He succeeds Dr. John Van de Erve, who recently resigned to take the chair of physiology in Marquette University, Milwaukee. Other appointments in the University of Alabama are: Dr. Howard H. Bell, of the University of Pennsylvania, full time assistant in the department of pathology; Dr. Jesse P. Chapman, instructor in orthopedic surgery; Dr. Percy J. Howard, associate professor of surgery; Dr. E. S. Sledge, instructor in radiography, and Dr. Julius G. Henry, instructor in medicine.

Dr. Wade H. Brown, professor of pathology in the University of North Carolina, Chapel Hill, has resigned, to accept service with the Rockefeller Institute of Medical Research, New York City, and has been succeeded by Dr. James A. Bullitt, late of the University of Mississippi.

Dr. Albert Einstein, docent for mathematical physics at the Zurich Technological Institute, known for his contributions to the theory of relativity, has been called to Berlin to succeed the late Professor J. H. van't Hoff.

## DISCUSSION AND CORRESPONDENCE

COLOR CORRELATION IN COWPEAS

Some facts developed in my genetic investigations with cowpeas (Vigna species) are of interest in connection with the remarks of Professor J. K. Shaw, on page 126, concerning color correlation in garden beans. There are

some interesting similarities and also interesting differences in these correlations as I have found them in the cowpea and as Professor Shaw finds them in the bean. I have, in most of the cases considered below, determined the particular Mendelian factor concerned in the correlation.

All varieties of cowpeas having coffee-colored seeds and all varieties having white or cream-colored seeds have white flowers and are devoid of anthocyan in stems and leaves. The flower color, which is due to an anthocyan, and the anthocyan in stems and leaves are dependent on two Mendelian color factors, one of which, apparently an enzyme, is the general factor for color in the seed coat of the cowpea. The other is the special factor for black which, when added to a variety having coffee-colored seeds, converts the seed color to black.

I have found three independent Mendelian factors for "eye" in the cowpea which, singly and together, give five distinct types of "eye." One of these factors, which gives the type of "eye" which I have designated the narrow "eye," also has the effect of inhibiting the development of anthocyan in the flowers, though it permits its development in stems and leaves. That is, the variety having the narrow "eye" has white flowers but has the pinkish-red or purplish color in certain portions of the stems and leaves. We apparently have here certain Mendelian factors which act differently in different parts of the plant, and this seems to be responsible for the correlation of the characters here discussed.

Cowpeas having any part of the seed coat black have anthocyan in the stems and leaves, and unless the factor for narrow "eye" is present there is also anthocyan in the flowers. Cowpea varieties having coffee-colored seeds have no anthocyan in stems, leaves or flowers. Cowpeas having buff or red seed coats may or may not have anthocyan in the stems and leaves and in the flowers according as the special factor for black or the factor for narrow "eye" is present or absent.

W. J. SPILLMAN

U. S. DEPARTMENT OF AGRICULTURE