curred in the raw cream butter several weeks before it appeared in the butter from the pasteurized cream. The oxidizing enzymes in raw-cream butter apparently accelerate the catalytic activity of the metallic salts which cause the production of typical "tallowy" butter. It was found that over-neutralization of the cream failed to accelerate materially the production of tallowiness by copper lactate. This paper will appear shortly in the *Journal of Dairy Science.*

The nutritive value of commercial corn gluten: C. O. JOHNS, A. J. FINKS AND M. S. PAUL.

The effect of calcium on the composition of the eggs and carcase of the laying hen: G. DAVIS BUCKNER AND J. H. MARTIN. Authors have shown that limiting the calcium supply of laying hens to that naturally occurring in the foods fed, causes a progressive thinning of the shell yet it does not materially change the percentage composition of the egg shells or their contents. The continued laying of eggs under this condition causes a gradual depletion of calcium in the carcase of the hen. It would seem from the figures obtained that as long as the economy of the hens permitted a formation of an egg shell that the contents of the shell would remain constant, thereby permitting an average supply of calcium for the proper development of the embryo of the chick.

Protein requirement in the maintenance metabolism of man: H. C. SHERMAN. (By title.)

The development of Tribolium confusum Duval in certain foods: ROYAL N. CHAPMAN. This study has shown that the confused flour beetle, *Tribolium confusum,* grows at about the same rate in the different grades of wheat flour and in some of the so-called wheat flour substitutes, but in certain of the low grade wheat flours and in some of the "substitutes" metamorphosis is retarded. The rate of development in first middlings wheat flour was adopted as the control. The instars were plotted on the ordinate and the time in days on the abscissa in such a way that the curve of development would be a straight line bisecting the angle. When the curves of development in other foods were superimposed upon the controls they were found to be very similar except for a prolongation of the last larval instar. Since metamorphosis takes place during the last instar, this prolongation has been taken as a measure of the nutritive effect upon metamorphosis. Certain low grade wheat flours, rye flour and rice flour prolonged the last instar while corn flour, steel cut oats and a synthetic food prolonged all instars about equally.

The influence of quinine on uric acid excretion in man: H. B. LEWIS AND W. L. MCCLURE. (By title.)

The uric acid content of normal human saliva: H. B. LEWIS AND W. S. GRIFFITH. (By title.)

Further studies on the chemical composition of normal and ataxic pigeon brains: MATHILDE L. KOCH AND OSCAR RIDDLE. A second series of analyses made on brains of pigeons affected with hereditary lack of control of the voluntary movements shows deviations from the normal brain in size and chemical composition. The brains are smaller. Eight analyses made on cerebrums and cerebellums show more pronounced changes in the cerebellums. Data for the chemical changes in the brain which accompany age have been obtained for a series of ages in the pigeon. The new and earlier evidence warrants the conclusion that chemical differentiation does not proceed as rapidly in the brain of ataxic birds as in the brains of normal birds.

A comparison of the distribution of various chemical groups in parts of the human and pigeon brain: OSCAR RIDDLE AND MATHILDE L. KOCH. Separate analyses made of anterior and posterior parts of the normal pigeon brain make it possible to compare these with similar parts of the human brain. It is found that the *direction of the percentage differences* in composition of the two parts of the brain is the *reverse* of that of the human in the case of every chemical fraction obtained. Also, from a chemical standpoint the cerebellum of the pigeon is an intermediate of the pigeon cerebrum and the human brain (cerebrum and cerebellum). The pigeon cerebrum is chemically least differentiated, the human cerebrum most differentiated, of the four organs compared.

CHARLES L. PARSONS,
Secretary

SCIENCE

A Weekly Journal devoted to the Advancement of Science, publishing the official notices and proceedings of the American Association for the Advancement of Science

Published every Friday by

THE SCIENCE PRESS

LANCASTER, PA. GARRISON, N. Y.
NEW YORK, N. Y.

Entered in the post-office at Lancaster, Pa., as second class matter