course as a preliminary to a more advanced one, the subjects can be treated in a more general and advanced form without, however, smothering the general principles in a multitude of details. One peculiar feature of this book which would probably attract the attention of a reader is the unusual method of introducing various subjects by what might be called a poetical reference to some action in the world at large as a basis to explain some chemical fact or hypothesis. While this appears, to the chemist who has been trained to reason on the basis of observed facts and to keep away as far as possible from unprofitable speculation, to be an unscientific method of treating the subject and one usually more suitable for primary grades, it may have its value, just as a study of models enables one to grasp more clearly the conception of stereochemistry and the configuration of molecules. On the whole, therefore, the reviewer considers that this book should be of value in introducing a class of girls to the part which chemistry plays in the affairs of the world surrounding them. J. L. G.

Die Normalen Asymmetrien des Menschlichen Körpers. By Professor Dr. E. GAUPP. Pp. i + 59, mit 8 Textfiguren. Jena, G. Fischer. 1909.

This little but useful volume forms a fourth part of a "Collection of Anatomical and Physiological Publications" written by Professors Gaupp and W. Nagel.

The present work is to a large extent a continuation of Professor Gaupp's former study concerning the right-handedness of man (No. I. of the same series of publications). It summarizes in a somewhat detailed manner the various observations recorded in anatomical and anthropological literature on such asymmetries of the different parts of the human body which are not due to disease, and at the same time it presents a thorough critical consideration of the many causes of these various inequalities.

A large part of the brochure is devoted to the asymmetries of the spine and to those of the limbs. The treatment of the inequalities in the different other parts of the osseous system is less comprehensive, and there is a lack of individual investigations by the author. Notwithstanding this the work will be very useful for reference to the student of the subject with which it deals, and will be further valuable by its large bibliography.

There could, perhaps, be found some fault with the term "normalen" in the title, for strictly speaking there are no *normal* asymmetries; but the author employed this term in want of something more expressive to denote that he is not dealing with the effects of pathological conditions. A. HRDLIČKA

SCIENTIFIC JOURNALS AND ARTICLES

The Journal of Biological Chemistry, Vol. VII., No. 4, issued March 25, contains the following: "The Purin Ferments of the Rat," by Alice Rohdé and Walter Jones. Investigation of extracts of the tissues of rats failed to demonstrate either adenase or xanthoöxidase. Rats' urine, however, contains uric acid. The origin of this uric acid must be attributed either to the action of purin ferments *in vivo* which do not exhibit themselves in organ extracts or to processes which do not involve the known purin ferments. For the latter explanation, much experimental proof exists. "On the Salts of Cytosine, Thymine and Uracil," by Victor C. Myers. A description of the preparation and some of the properties of the sodium, potassium, mercury and lead salts of thymine and uracil. "The Presence of Iodine in the Human Pituitary Gland," by H. Gideon Wells. Analysis of human pituitary glands taken from subjects who had not received iodides while in the hospital failed to show iodine in the gland: similar analyses of glands from subjects who had received iodides revealed iodine in the pituitary gland. Hence the normal presence of iodine in the gland is unproved. "A Note on the Physiological Behavior of Iminoallantoïn and Uroxanic Acid," by Tadasu Saiki. Elimination of purins in the urine is unaffected, excretion of oxalic acid is increased by the administration of either of the abovementioned substances. "Nylander's Reaction

in the Presence of Mercury or Chloroform," by M. E. Rehfuss and P. B. Hawk. Neither mercuric chloride nor chloroform interferes with Nylander's test for sugar performed in the manner described by these authors. "A Study of Nylander's Reaction," by M. E. Rehfuss and P. B. Hawk. A study of various methods of performing the test, its delicacy, the effects of temperature and the influence of a variety of substances upon it (drugs and urinary constituents). "Effects of Soluble Salts upon Insoluble Phosphates," by J. E. Greaves. Various salts such as sulphates, chlorides, nitrates of sodium, calcium, ammonium or magnesium may increase the solubility of the insoluble phosphates and so indirectly affect the growth of plants.

BOTANICAL NOTES

PAPERS ON TREES

THREE papers upon the hawthorns (*Crataegus*) have come to hand during the past few months. The first by W. W. Eggleston—"The Crataegi of Mexico and Central America" (*Torrey Bull.,* 1909)—describes the wild species and varieties of these countries, ten in number, of which four species and two varieties are here named for the first time. The author remarks that "the genus *Crataegus,* south of the United States, seems confined to the tablelands of Mexico, and southward through the highlands of the Andes. In Mexico the fruit is of much economic importance, being often found in the markets, and the trees are guarded as carefully as other fruit trees are with us."

The same author in a later number of the *Torrey Bulletin* under the title "New North American Crataegi," describes three new species from (1) Texas, (2) North Carolina, eastern Tennessee and southern Virginia and (3) Montana.

Professor Sargent has been studying the "American Crataegi in the *Species Plantarum* of Linnaeus" (in *Rhodora,* 1909) in the Plukenet Herbarium (British Museum), and in the Linnaean Herbarium. *Crataegus viridis* is identical with *C. viridis* of the southeastern United States. *C. crus-galli* can not certainly be identified with any of our species. Of *C. tomentosa* he says "it is not possible to guess even at the plant described by Linnaeus" under this name. *C. coccinea* is in such confusion that Professor Sargent abandons the name, and substitutes for it the name *C. rotundifolia,* var. *pubera.*

Ivar Tidestrom's "Notes on Populus, Plinius" (in *Midland Naturalist,* 1909) attempts to distinguish *Populus alba, P. canescens* and *P. alba bolleana.* His discussions and descriptions are made plainer by two plates.

Before leaving Vermont for Wisconsin Professor L. R. Jones completed with the aid of F. V. Rand a most useful paper on "Vermont Shrubs and Woody Vines" (Bull. 145, Vermont Experiment Station), including figures and descriptions of the smaller woody plants of his state. He enumerates 135 species, and this does not include any species of *Crataegus,* this genus being passed over with only a characterization of the "groups." The excellent and life-like cuts (by Mary Robinson) enable one to follow the text descriptions very easily. We wish here to record our conviction that bulletins of this kind, although not "agricultural" in the narrower sense, are very properly included among the publications of the Agricultural Experiment Stations, since they bring to all who are interested in trees and shrubs much information which must lie at the foundation of many "practical" investigations.

Professor Shimek discusses "A Hybrid Oak" (in *Proc. Iowa Academy of Sciences,* 1909) and by comparisons and figures shows it to be pretty certainly a hybrid of *Quercus imbricaria* and *Q. palustris.*

Allied somewhat remotely to the foregoing papers is H. H. Bartlett's article on "The Submarine Chamaecyparis Bog at Woods Hole, Massachusetts," in *Rhodora,* December, 1909. A photograph shows well the roots of trees that once grew at levels now covered at high tide.

Professor Shimek read a paper on "The Relation of Forestry to Engineering" early in