Denis M. Shaw reports on "The geochemistry of gallium, indium, thallium." The history, chemistry, and cosmic abundance are discussed, then the geochemistry of each is separately reviewed. Outstanding problems needing investigation are summarized: geochemical affinities and cosmic distribution as deduced from meteorites; occurrence in sulfides; precise analyses aimed toward investigating the perplexing tin-indium association; and greater analytical sensitivity for restudy of distribution of indium in silicates. The association of thallium and manganese in sediments needs confirmation.

P. J. Melchior reviews "Latitude variation." He makes very clear the importance and difficulty of the observational procedures and the enormous patience and care of the International Latitude Service. The maximum diameter of the curve described by the instantaneous pole observed since 1900 is about 0.7 second, corresponding to a displacement of 21 meters on the earth's surface. The variations of latitude determined by astronomical observations contribute to problems involving elastic deformations of the earth, secular displacement of the mean pole, and some of the dynamical properties of a liquid core.

Volume 2 has subject index and name index, and each chapter has many references. The careful study of this book pays large dividends in broadened horizons.

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Natürliche und Künstliche Erbänderungen. Probleme der mutationsforschung. Hans Marquardt. Rohwolt, Hamburg, Germany, 1957. 177 pp. Illus. Paper.

Radiation genetics is, at the moment, in a strange situation. There is, on one hand, a great general interest in the effects of atomic radiations on our hereditary substance, and there exist, on the other hand, no manuals or textbooks to inform the public, or members of the medical profession, biologists, radiobiologists, and physicists, of the present stage of mutation research. To bridge the gap, H. Marquardt, professor of forest-botany at the University of Freiburg (Breisgau, Germany), presents in this little booklet (No. 43 of Rohwolt's *Deutsche Enzyklopädie*), in five chapters, a well-rounded picture of the existing situation, tying the principal experimental facts of mutation research into a unit with the logical conclusions and consequences. There is a short survey of the historical development, followed by chapters that deal, respectively, with the cytological foundations, the genetic foundations, the mutation process, and the importance of modern mutation research for our technical age.

The book is written in a clear, pleasant, and musical diction—Marquardt holds, besides his Ph.D. in biology, a doctor's degree in music—and reads like a thrilling report on an expedition in unknown territories. It is surprising how much—by proper arrangement of the facts—can be said in such a small volume. The book will definitely fill a present need and will be welcomed in wide circles; only the language barrier will limit its use.

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Climatology. Treated mainly in relation to distribution in time and space. W. G. Kendrew. Oxford University Press, New York, ed. 2, 1957. xv + 400 pp. Illus. + plates. $6.75.

Although this is a revision of the first edition, published in 1949, it is essentially a moderately altered edition of *Climate,* published in 1930, which contained most of the material of the present edition. Numerous small changes have been made, and a few new paragraphs have been added, together with an inadequate bibliography, mostly of British publications.

This volume was written "for the general reader" and affords brief statements about numerous aspects of climate, with, however, few explanations of the causes for the local differences. Part 1 (10 chapters) concerns insolation and temperature; part 2 (7 chapters) deals with atmospheric pressure and winds; part 3 (11 chapters) deals with atmospheric vapor and its condensation and also with sunshine and visibility. Mountain climates are discussed in part 4 (5 chapters), and the "weather of the westerlies" is covered in part 5 (5 chapters). The final part (3 chapters) is called "Some climatic types."

In addition to illustrations of the conventional aspects of climate there are brief discussions of smog, fronts, periodicities, hail, tornadoes, and hurricanes. The presentation is formal or "heavy." The examples are largely from the British Isles or from British colonies or ex-colonies. This volume is not suitable as a text, nor is it one of the better popular treatments of the subject.

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The Pigeon. Wendell Mitchell Levi. Levi Publishing Company, Sumter, S.C., 1957. xxvii + 667 pp. Illus. $20.

Biologists, psychologists, and others who study the pigeon have made good use of the first edition of this book, and the second edition carries them further into W. M. Levi's debt. An enormous amount of information is brought together from the most diverse sources. Much of it, particularly the discussions of breeding, housing, care, and diseases, is of great practical value to those studying the pigeon in laboratory or loft. The beautifully illustrated sections on the history and varieties of pigeons are of more general interest. The sections on anatomy, physiology, genetics, and behavior could not, in the nature of the book, be complete, but they are useful accounts for the nonspecialist. The section on commercial squab production, though of no immediate scientific interest, is written with special authority. There are delightful miscellanies scattered through the text. Among the 1127 illustrations the reader will find pictures of Old English dovecotes, Egyptian-style multiple lofts, bells attached to the feet of pigeons in Bali, and a set of 15 perfectly tuned pipes once sewn to the tail feathers of a pigeon in Peking.

So ambitious an undertaking is bound to have an occasional blemish (the index is not fully adequate, for example), but the book is, nevertheless, a landmark in the literature on the pigeon. Beyond that, it is an achievement of a dedicated layman (Levi, though he served in a Pigeon Section of the Signal Corps in World War I and has been an officer in many organizations concerned with pigeons, is a lawyer) which might put many a professional scientist to shame.

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Die Periphere Innervation. Emil Villiger. Schwabe, Basel, Switzerland, ed. 11, 1957. 210 pp. Illus. $5.

This book on the peripheral nervous system is the companion volume to Emil Villiger's well-known text on the anatomy of the brain and spinal cord. After ten years it now reappears in its eleventh edition, attesting to its perennial popularity. Since Professor Villiger's death, both volumes have been taken over and revised by his successor, Eugen Ludwig, presently professor emeritus of anatomy at the University of Basel.

Die Periphere Innervation begins with a completely new chapter on the general characteristics of peripheral nerves, including data on their ultrastructure as