Contributions to the Theory of Riemann Surfaces. L. Ahlfors *et al.*, Eds. Princeton Univ. Press, Princeton, N. J., 1953. 264 pp. $4.

A hundred years ago Bernhard Riemann wrote his famous and fundamental doctoral thesis *Grundlagen für eine allgemeine Theorie der Functionen einer veränderlichen complexen Grösse,* in which he created the geometric function theory and, in particular, introduced the concept of "Riemann surfaces." In order to celebrate this centennial anniversary, a Conference on Riemann Surfaces was held at Princeton, 14–15 Dec. 1951. On this occasion 21 well-known mathematicians presented papers that showed the great and inspiring influence of Riemann's ideas to the development of modern mathematics.

An introductory article by L. V. Ahlfors gives a very interesting historical review on the 100 years of the theory of conformal mapping and Riemann surfaces up to our present time. The wide range of the more special contributions of the other mathematicians is very remarkable. They discuss variational methods (M. Schiffer), topological methods (J. A. Jenkins and M. Morse), Dirichlet's principle (Z. Nehari, M. Schiffman), conformal mappings (J. A. Jenkins, A. C. Schaeffer, S. E. Warschawski), studies of Riemann surfaces under many different points of views (E. Calabi, L. Fourès, M. Heins, S. Kakutani, W. Kaplan, P. C. Rosenbloom, H. L. Royden), structure of complex spaces (S. Bochner), functions on Riemann surfaces (L. Bers, L. Sario), linear partial differential equations (S. Bergman), operators on manifolds (D. C. Spencer), and the Riemann-Roch theorem (K. Kodaira). These many diversified contributions show that the interest in these questions is at present alive and strong.

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Notions Elémentaires de Chimie Générale. Paul Pascal, Masson, Paris, 1953. 550 pp. Illus. + plates. 3600 fr.

During 1949–52 Paul Pascal published four volumes, totaling 1800 pages and constituting "an exposition, theoretical and critical, of the principal problems of Physical Chemistry that should be known to every trained chemist."

The present volume is a selection of themes and topics from this exhaustive treatise and is a summary for the reader who cannot afford the time or does not have the mathematical training to master the definitive work. It is designed specifically for premedical and biology students. It is not so much concerned with "general" or descriptive chemistry, as we would use the terms, but rather with classical physical, including colloid, chemistry.

To compensate for his selectivity of coverage and for his abridgment of full mathematical treatment, the author has included many diagrams and models designed to aid comprehension of the text. Also, "thanks to the relative independence of the principal chapters, a reader stopped by a momentary difficulty can 'jump,' during a first reading, without risk of losing the sequence of the development." Another useful feature is a chapter on the reading of graphs.

The main chapter headings are "Evolution of ideas on the nature of matter"; "Lacunal and discontinuous structure of things"; "Structure of the material atom"; "Modification of the nuclear structure"; "Molecular and ionic structures"; "Macrostructures"; "Mechanism of grouping of atoms and ions"; "Chemical kinetics"; "Evolution and equilibrium of chemical systems"; "Graphical representation of systems"; "Particulate study of liquid solutions"; "Surface phenomena"; and "Disperse systems."

The literary style is direct, and the American reader with a moderate facility in technical French will have no difficulty. This book could profitably be read not only by students but also by mature professionals in the collateral sciences, particularly the biological. I know of no entirely comparable work in English.

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Handbook of Freshwater Fishery Biology with the First Supplement. Kenneth D. Carlander. Brown, Dubuque, Iowa, 1953. v + 429 pp. $6.50 (Owners of the *Handbook,* 1950, may purchase the supplement, separately bound, for $3.)

Various branches of science not richly endowed with funds for bibliographic syntheses are sometimes blessed with a scholar of classical unselfishness. Fisheries is currently such a field, and Kenneth Carlander is such a scholar. It was my pleasure to review [*Science* **113**, 458 (1951)] this author's first source book of age, growth, and life-history data on American food, game, and other fishes. The supplement extends and brings more nearly up to date the published information on the subjects covered. Its outstanding feature is the expanded section on population data. This part composed less than 5 percent of the original work but makes up more than 10 percent of the supplement. It adds about 450 titles to the original number of some 1100 which were abstracted earlier. The summary is indicative of a tremendous investment on the part of American workers in descriptive studies of growth in length and weight. It makes one wish that proportional effort had been spent on the how and why of fish growth

Subdivision of the topic "Population data" in the table of contents for both original and supplement would have helped me and, more importantly, the user.

One cannot peruse a compilation such as Carlander's without regretting that so much additional information, of the kind reported, is not generally available for inclusion. Examples of such data are in the countless unpublished reports that lie in the files of state, federal, and private fishery agencies and in the many unprinted collegiate theses. It would seem desirable that fishery workers generally adopt an active pro-