Under life societies, the author takes up first the life of the ponds and pools that occur in moors. The algae, protozoa, rotifers and crustacea of the open waters are considered as well as the bottom fauna. The population is made up of ubiquitous forms and of those that are rather closely restricted to habitats of this character.

The moss turf usually holds a great deal of water which is well populated with a great variety of characteristic forms of algae, rhizopods, Turbellaria, rotifers and nematodes. In high moors the population is much smaller and the variety of organisms is rather limited. There is also a characteristic air-breathing fauna which shows considerable variation in composition in the different kinds of moors.

A bibliography of 178 titles is given.

C. JUDAY

WISCONSIN GEOLOGICAL AND NATURAL HISTORY SURVEY

Icones Plantarum Sinicarum. By H. H. HU and W. Y. CHUN. Fasc. 2, pp. 1–50, pl. 51–100. The Commercial Press, Shanghai, 1929.

THIS folio work prepared under the auspices of the Science Society of China and the department of botany, National Central University, Nanking, reflects distinct credit on both the authors and the publishers. Detailed descriptions in both English and Chinese of fifty indigenous species, together with important synonyms, geographic distribution, etc., are given. The figures, drawn natural size with enlarged details of the essential parts, are well executed and graphically represent the several species, many of which are here figured for the first time. The work is one that should be consulted by all botanists interested in the Chinese flora and in the preparation of monographic treatises.

E. D. MERRILL

UNIVERSITY OF CALIFORNIA

SCIENTIFIC APPARATUS AND LABORATORY METHODS

CHART ILLUSTRATING THE HISTORY OF BIOCHEMISTRY AND PHYSIOLOGY

MAY I be permitted to call the attention of the readers of SCIENCE to a recently published chart dealing with the history of the twin sciences of physiology and biochemistry?

This chart, which has been reproduced from the original by a lithographic process, gives a two-dimensional account of the historical development of these and cognate sciences. The arrangement is that of a graph, the vertical scale being in years and running from 1450 to 1900 with ten-year intervals marked off by horizontal lines. The lives of individual investigators are represented by continuous vertical lines beginning at the date of birth and ending at the date of death. Beside each such line is the name of the investigator in capital letters, with special signs indicating the university in which he was professor or the town where he worked. The vertical divisions group the investigators into anatomists, physiologists, biochemists, chemists, zoologists and philosophers. Diagonal wavy or dotted lines indicate relationships, controversies and succession in professorial chairs, and in this way also the main streams of intellectual influence are shown. At the date of publication of an important book or memoir, a thin horizontal line leaves the life-line of the investigator in question and leads to the title followed by a short description of the book. In addition to these descriptions there are quotations and notes interspersed throughout. In order to give an idea of contemporary events, the lives of men not biologists are shown in a separate column, *e.g.*, Galileo, Cervantes, Montaigne, Erasmus, Browne. Certain wars are also represented by vertical lines; the founding of associations such as the Royal Society is marked, and the beginnings of scientific journals noted. Before 1450 there is no regular time-scale, but the achievements of classical antiquity, the Hellenistic age and the dark ages are briefly referred to. The chart may be said to give a wide and detailed survey of the history of biochemistry and physiology, but its interest for biologists in general is considerable, as before 1800 the fields of study were not clearly differentiated, and until then the chart is practically a history of biology as a whole.

JOSEPH NEEDHAM

BIOCHEMICAL LABORATORY,
UNIVERSITY OF CAMBRIDGE

FIXING THIN BLOOD SMEARS FOR STAINING WITH IRON HEMOTOXYLIN AND WITH GIEMSA'S STAIN

THE writer was unable to make satisfactory iron-hematoxylin preparations of blood smears that were fixed by the methods commonly in use because the erythrocytes retained this stain very tenaciously and, when they were finally destained, the chromatin of intracellular blood parasites was found to be likewise destained. The following modifications of well-known methods have, however, been made with success. Thin smears were dried in the same way as for Giemsa's preparations and fixation was completed by immersion in Schaudinn's alcoholic sublimate solution without acetic acid. The erythrocytes did not then take the hematoxylin, whereas the intracellular blood para-