system in the dog as a means of removing excessive amounts of fluid from the lung. Variations in lung movement and expiratory and inspiratory resistances were found to affect the rate of pulmonary lymph flow. There is an excellent critique of various methods of artificial respiration in which a strong stand is taken against the use of mechanical resuscitators.

Dr. Drinker recommends the administration of oxygen under higher than atmospheric pressure for the treatment of pulmonary edema, on the ground that the added pressure will oppose filtration from the pulmonary capillaries. To this reviewer it does not appear that the application of the recommended 6 cm. of water pressure at the mouth of a patient will oppose capillary filtration to a significant degree. We have found that the pressure available for opposing capillary filtration cannot be assumed to be equal to that applied at the mouth, since roughly half of the applied pressure is transmitted to the intrapleural space, this transmitted portion increasing the pressure in the pulmonary artery and vein. It is improbable that the resulting pressure increase, which would amount to 2 to 3 cm. of water, would exert significant counterpressure to oppose capillary filtration.

A discussion of the pathogenesis of pulmonary edema in man is a difficult one to write at this time, because blood pressure in the pulmonary capillaries, oncotic pressure of the plasma proteins in the pulmonary circulation, and tissue tension have not been measured quantitatively in man, nor are the factors governing variations in the passage of fluid through the capillary wall understood. Perhaps the application of the right heart catheterization technic in man will be productive of significant quantitative data on pressure relationships in the lesser circulation in relation to the problem of pulmonary edema. Dr. Drinker has performed a difficult task well. *Pulmonary edema and inflammation* is stimulating and fills a gap in medical literature. The book is highly recommended.

HERBERT CHASIS
New York University College of Medicine

Insect dietary: an account of the food habits of insects. **Charles T. Brues. Cambridge, Mass.: Harvard Univ. Press, 1946. Pp. xxvi + 466. (Illustrated.) $5.00.**

In this book the author presents an account of the food habits of insects which is very comprehensive in coverage and quite readable. Each chapter is supplemented with an excellent bibliography of the special subject under discussion, thus bringing together a great many resources for the student of insects not hitherto of easy access.

The book does not, as might be expected from the title, go into the chemical phases of insect food or into insect metabolism, which might have interested some students more, but which would have made the book less interesting to the inquirer about insect food habits. The chapter on abundance and diversity of insects assembles many estimates of insect populations under diverse specific conditions. The stupendous numbers per acre in many of these estimates would be hard to believe if they were not the conscientious estimates of many observers. Dr. Brues then proceeds to analyze the food habits in relation to structure and environment, follows with separate chapters on the herbivorous insects, the gall makers, and the predators and parasites. An interesting chapter is that on the use of fungi and microbes as food of insects, and the insect symbiosis with such microorganisms. This is a subject seldom treated in textbooks, and consequently the long bibliography will be of great use. The parasitic insects are divided into the external parasites of vertebrates and the internal parasites of insects and vertebrates. The final chapter considers the insects as food of microorganisms, of insectivorous plants, and of lizards, amphibians, birds, mammals, and man.

On the whole, this is a very useful book, packed with information and references to stimulate further research. It will be invaluable to lecturers.

W. DWIGHT PIERCE
Los Angeles County Museum
Los Angeles, California

Dvorine color perception testing and training charts. **(Vol. I: Testing charts; Vol. II: Training charts.) Israel Dvorine. Baltimore: Israel Dvorine, 1944. $25.00.**

This work consists of two volumes of color plates and a brief pamphlet of instructions. Although the jacket states that these are "the first set of pseudo-isochromatic charts developed by an American," the construction of the plates follows that of the Ishihara, Rabkin, and Stilling plates, retaining most of their faults but lacking valuable diagnostic features of the older plates. It appears that the fundamental researches of the last half century, including those of Pitt, Wright, and Judd, have been ignored.

The Introduction states: "The colors of these charts are based on the subtractive color theory; that is, that the primary colors are red, yellow and blue. . . ." This is a useful working principle for mixing printing inks, but it bears no relation to the design of a color system which diagnoses color blindness.

The claim that the system "selects individuals who are not color blind but who merely become visually confused by certain color combinations" is a dangerous play on words. The Navy, for instance, cannot afford to use men who "visually confuse" red and green light signals.

It is claimed that the second volume is useful in the training of color vision. There is no doubt that men can be "trained" to improve their scores on pseudo-isochromatic tests, but there is no indication that men are less color blind as the result of such training. Rather, this proves that such tests are defective as measuring instruments. The net result of the present widespread teaching of "how to pass the plates" is merely that better and less learnable methods for testing color vision will be developed and substituted.

DEAN FARNSWORTH, LT. CDR., USNR
U. S. Submarine Base, New London, Connecticut