BOOK REVIEWS


This monograph on platelets is a welcome addition to the constantly increasing number of fundamental studies on the morphology and physiology of the blood cells. The behavior of the blood platelets is studied by an ingenious new technic which utilizes photomicrographs taken with a dark-field microscope. Platelets were studied in plasma suspensions prevented from clotting by chemical means (magnesium sulfate, sodium citrate) and in plasma which was prevented from clotting by freezing immediately after withdrawal of the blood.

The platelets assumed changes in form within the first 11 to 24 hours: they were oval or round immediately after puncture; then they rapidly became "irritation" forms (within four hours), at which stage pseudopodia appeared with end-bulbs which attached the platelets to foreign objects such as glass slides. This stage was followed by swelling and disintegration. Some of the platelets went into a "rest" form before disintegration. The process of degeneration included segmentation of pseudopodia, separation of "ring forms," and disintegration of the complete platelet. "Agglutination heaps" resulted from the adherence of several platelets by means of interlocking pseudopodia and bodies.

In cooled plasma, the changes were similar to those in plasma rendered noncoagulable by sodium citrate or magnesium sulfate. Here, however, it was possible to follow the process of coagulation more readily. Thus, as the plasma became warmed, masses of platelets were readily detected, and the sticking of the heaps to the glass slides, the appearance of fibrin needles, in the process of clot retraction could be ascertained. Similar events were found in the capillaries of the frog in vivo after diathermic injury.

The monograph is excellently conceived and beautifully illustrated with numerous dark-field photomicrographs depicting in great detail the various platelet changes. It is unreservedly recommended to all interested in platelet physiology and the study of coagulation and thrombosis.


In 1943 a special committee was appointed by the Medical Research Council of Great Britain to survey the hemoglobin levels in large social groups of the population, in an attempt to obtain evidence as to the nutritional state of the people of Great Britain after four years of war. The results of the investigation are presented in this monograph.

After theoretical and technical considerations, the authors present data on various groups in the population. Briefly, some of the conclusions are as follows: The incidence of low hemoglobin levels in the population in 1943 was not so great as in previous studies, but was still high in certain specialized groups, notably young children, pregnant women, and people in low-income brackets. The mean hemoglobin for men was only slightly below the mean hemoglobin value considered "satisfactory" before the onset of the war. The mean hemoglobin for women was 8 to 10 per cent lower than that for men, at most ages. There was some difference between married and unmarried women, attributable to the reduction in hemoglobin found to accompany repeated pregnancies. As the number of pregnancies increased in any age group before the menopause, a small but consistent decline in hemoglobin level was noted. Serious anemia, on the other hand, was rare in all groups, although the incidence of anemia in general was disproportionately high at ages 1 to 5, and some 7½ per cent of men and women in all groups had hemoglobin levels below 90 and 80 per cent respectively.

In addition to the factual data, certain theoretical considerations are of interest. The monograph includes a discussion of physiological factors which influence hemoglobin levels, together with an excel-
lent chapter by Dr. R. G. Macfarlane on the errors of hemoglobin estimation by the Haldane-Gowers method (a comparator method using carboxyhemoglobin).

The monograph is well produced and excellently fitted to the purpose for which it was intended. It will presumably serve, too, as a base-line for postwar investigation of nutrition, and thereby allow partial evaluation of the effect of war upon a people's erythropoietic system.