

the second group (ox, sheep, pig, horse, dog, and cat) there is slow hemolysis with a high temperature coefficient, and no retardation by CO<sub>2</sub>, acids, or copper salts. In the case of glycerol, ethylene glycol, and thiourea, the relative times for lysis of the red cells of different species tend to run parallel with the temperature coefficients for the lytic process in question. The paper contains a very full discussion of the validity of the hemolysis method for measuring permeability of red cells to water and solutes at different temperatures, and the measurements are made by this method throughout. Ponder (Cold Spring Harbor).

**Haden, Russell L.,** The mechanism of the increased fragility of the erythrocyte in congenital hemolytic jaundice. Amer. Journ. Med. Sci. 188, 441—450, 1935.

Starting with the observation that the red cells in congenital hemolytic jaundice show a diminished resistance to hypotonic hemolysis and also a reduced volume-thickness index (or diameter/thickness ratio), the author suggests that there is a direct relation between the volume-thickness index of red cells and their fragility. He supports this idea by pointing out that there is a relation between the diameter/thickness ratio and the fragility of the cells of different mammals, and gives figures to show a similar relation between fragility and volume-thickness index in various pathological conditions in man. Many of the figures used are far from reliable, but the paper is of great interest in that it contains the first suggestion (to my knowledge) that red cell fragility is dependent on *shape*. Fragility has often been related to red cell volume, and I doubt if it would be experimentally possible to distinguish between a dependence upon shape and a dependence upon volume: Haden's suggestion, however, opens up several new possibilities. Ponder (Cold Spring Harbor).

**Kennedy, Walter P.,** Further studies on the polynuclear count in Iraq. Trans. Roy. Soc. Trop. Med. and Hyg. 29, 291—298, 1935.

This paper contains a conclusive proof of the long-suspected "local variation" in the polynuclear (modified Arneith) count in man (see Amer. Journ. Physiol. 111, 655—659, 1935, and J. Path. and Bact. 40, 381—389, 1935). The author was able to make polynuclear counts on (a) a group of 134 British airmen stationed near Baghdad, and (b) a group of 134 healthy natives from the same region. Both groups had substantially the same polynuclear count, with a mean of 1.99, instead of the usual polynuclear count as reported for healthy persons in Britain, 2.73. The experiment is unusually well controlled, and the odds are enormously in favour of the airmen's counts having been "shifted to the left" as a result of their stay in a tropical climate. The author thinks that ultra-violet light and heat are probably important factors in bringing about the change. Ponder (Cold Spring Harbor).

**Fukuda, Y.,** Über die Hydratur der Pflanzen und eine empirische Formel der Verdunstung und Transpiration. Pflanzenforschung, Heft 19. Jena, Gustav Fischer, 1935, IV + 79 S., 21 Textabb. Preis RM 6.—.

Verf. hat einen Studienaufenthalt in Europa benutzt, um sich mit Problemen des pflanzlichen Wasserhaushaltes gründlich vertraut zu machen und veröffentlicht die Frucht dieser, vorläufig überwiegend theoretischen, Durcharbeitung des Gebietes. Im Hydraturstreit neigt er zur Seite jener, die der Hydratur der Zelle (Saugkraft) einen theoretischen Vorrang vor der Hydratur des Plasmas (gemessen durch den osmotischen Wert) einräumen. Den Hydratur-Temperaturvergleich originell weiterspinnend prüft er, ob die Einstellung auf ein neues Hydraturgleichgewicht analog dem Newtonschen Abkühlungsgesetz in einer Exponentialkurve erfolgt. Eigene Versuche mit Gewebewürfeln und Daten aus der Literatur zeigen, daß das tatsächlich in erster Annäherung der Fall ist. Allerdings setzt eine so einfache Gesetzmäßigkeit einen konstanten Proportionali-