Energesis includes all metabolic processes by which energy is released. It occurs at all times in all living parts of all organisms.

Respiration includes all processes by which a gas necessary for energesis is taken into an organism, or by which a gas produced by energesis is expelled.

The relationship between respiration and energesis is that which exists between a draft and a fire. Respiration is generally but not universally associated with life. Photosynthesis, where it is proceeding at a perceptible rate, furnishes the one gas and removes the other by chemical processes taking place upon the spot; it makes respiration unnecessary.

MITOSIS AND CELL DIVISION

In most organisms, whenever the division of a nucleus approaches completion, the cell containing it begins to divide. Many biologists think of the division of the nucleus and that of the cell as inseparable, and apply the term mitosis to the entire process. There exist, however, a considerable number of examples of the separation of nuclear division and cell division. In cells of *Vaucheria* and *Rhizopus,* and in the endosperms of most seed plants, mitosis takes place repeatedly before any cell division occurs. Bacteria exhibit cell division in the absence of any process recognizable as mitosis. The term *karyokinesis,* construed as an exact synonym of mitosis, refers, etymologically, specifically to the nucleus. The following definition is perhaps tenable:

Mitosis or karyokinesis is nuclear division in the typical fashion, producing two nuclei of exactly the same genetic constitution (overlooking aberrations) as the original one.

The use of many other terms is open to discussion, but I forbear.

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THE POSSIBLE ROLE OF CHARA FRAGILIS IN MOSQUITO CONTROL

IN 1919 Caballero[1] in Spain published papers on the role of *Chara foetida* as a mosquito larvicide. In 1924 Barber[2] in the United States secured negative results with *Chara robinsii.* There has been considerable study of the subject, which was summed up in 1930 by Matheson,[3] who suggests that ingestion of oxygen bubbles given off by the plant may be injurious to mosquito larvae.

The writer has experimented with *Chara fragilis,* furnished by the botanical institute of Central University of Quito, and has used the five most common mosquito species of Ecuador. These are *Culex fatigans, Aedes aegypti, Aedes eupochamus, Anopheles albimanus* and *Anopheles pseudopunctipennis* var. *pseudopunctipennis.* Two of these species are malaria vectors, while one may carry yellow fever and dengue. Experiments with each of the five species were conducted in the same way, as follows:

(1) In an aquarium with growing *Chara fragilis* were placed 4 eggs; in another aquarium with hay infusion were placed 4 eggs. Normal hatching and development occurred in both.

(2) Four eggs were placed in a Chara infusion and compared with 4 in water. Normal development occurred in both.

(3) In the same way a water extract of fresh stems of Chara was compared with water, using 4 eggs in each for each species. Again development was normal in both media.

(4) Oospores of *Chara fragilis* were dried, crushed, mixed with yeast, and given to growing larvae of the first, second, third and fourth instars. These larvae developed normally, as did those in the check.

(5) Rotted stems of *Chara fragilis* were used in the same manner as the spore preparation, with the same results.

It may be noted that this Chara was found with other algae in pools where mosquitoes were breeding in nature. It was also noted that larvae ingested small particles of Chara, as Barber observed.

These experiments fail to indicate any pronounced controlling action of *Chara fragilis* against mosquitoes.

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SCIENTIFIC BOOKS

CLINICAL DIAGNOSIS

Clinical Diagnosis by Laboratory Examinations. By JOHN A. KOLMER. First edition, revised. xlii + 1247 pp. 78 figs. 137 tables. New York: D. Appleton-Century Company, Inc. 1944. $10.00.

THE material in this book is concerned primarily with two phases of the physician's contact with his patient; when he is trying to decide what laboratory examinations will aid in either diagnosis or prognosis and when he has received the laboratory report and

[1] A. Caballero, *Bol. R. Soc. Esp. Hist. Nat.,* 19: 449–455, 1919.

[2] M. A. Barber, *Pub. Health Repts.,* Washington, 39(13): 611–615, 1924.

[3] R. Matheson, *Am. Nat.,* 64: 56–86, 1930.