globin are recognized, they can be designated hemoglobin A_1, hemoglobin A_2, etc. (*6*).

2) Normal fetal hemoglobin, or hemoglobin F, previously also referred to as hemoglobin *f* (*6*, *7*). Again, with the discovery of normal subvarieties they can be designated hemoglobin F_1, hemoglobin F_2, etc. (*6*).

3) Sickle cell hemoglobin, or hemoglobin S, previously also referred to as hemoglobin *b* (*4*).

4) Hemoglobin C, previously referred to as hemoglobin *c* (*4*), hemoglobin III (*3*), or hemoglobin X (*8*).

5) Hemoglobin D, previously referred to as hemoglobin *d* (*4*).

It is suggested that as new varieties of hemoglobin are described, they be assigned letters of the alphabet in the order of their discovery, beginning with E, unless, as in the case of sickle cell hemoglobin, there is some outstanding associated hematological or clinical effect which will serve as the basis for a convenient mental association.

It is felt that adherence to this system, with the introduction of modifications only as necessitated by further discoveries, will tend to minimize confusion based solely on terminological differences.

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References

1. PAULING, L., *et al. Science,* **110**, 543 (1949).
2. ITANO, H. A., and NEEL, J. V. *Proc. Natl. Acad. Sci.,* **36**, 613 (1950).
3. KAPLAN, E., ZUELZER, W. A., and NEEL, J. V. *Blood,* **6**, 1240 (1951).
4. ITANO, H. A. *Proc. Natl. Acad. Sci.,* **37**, 775 (1951).
5. SINGER, K., CHERNOFF, A. I., and SINGER, L. *Blood* **6**, 413 (1951).
6. ROCHE, J., DERRIEN, Y., and ROQUES, M. *Compt. rend. soc. biol.,* **146**, 689, (1952).
7. ITANO, H. A. *Science,* **117**, 89 (1953).
8. GRAY, G. W. *Sci. American,* **185**, 56 (1951).

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The First Law of Fluorescence

SLIGHTLY more than ten years ago, the present writer pointed out the "First Law of Fluorescence" (*1*). This was derived by reasoning analogous to the basic rule of photochemistry, known as the First Law of Photochemistry or the Grötthuss-Draper law. The latter law was first discovered in 1817 by Grötthuss; after an interval of about 26 years, this law was independently rediscovered by Draper; some 60 years later the Grötthuss-Draper law was quantified by van't Hoff.

In 1942 the First Law of Fluorescence was stated as follows: *"energy must be absorbed by a luminescent system before emission (i.e., luminescence) can occur"* (italics in original). An old reference has just come to my attention which establishes that this law is at most an independent rediscovery. In 1876 Eugene Lommel (*2*) published the following statement: "The general proposition can therefore be laid down, *that a body capable of exhibiting fluorescence fluoresces by virtue of those rays which it absorbs*" (italics in original).

Obviously, then, due credit for priority must be given Lommel, and any eponym must take this into consideration.

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References

1. DE MENT, J. *Science,* **96**, 157–58 (1942).
2. LOMMEL, E. *The Nature of Light, with a General Account of Physical Optics.* New York: D. Appleton and Company, 184 (1876) [written: Erlangen, July 1874].

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Book Reviews

Methods and Principles of Systematic Zoology. Ernst Mayr, E. Gorton Linsley, and Robert L. Usinger. New York–London: McGraw-Hill, 1953. 328 pp. Illus. $6.00.

Zoological systematics, widely scorned a generation ago as a dusty routine, has recently come alive again. It is now being more widely taught, more earnestly discussed, and more intensely studied than ever before. One reason for renewed interest is that even the more limited aspects of the science are undergoing a revolution, from typological taxonomy to population systematics, a movement parallel to and strongly influenced by the shift from, strictly speaking, Mendelian genetics to population genetics. Another reason is that systematists have broadened their objectives. It has never been true, in spite of criticisms to that effect, that they were solely occupied in labeling specimens. It is, however, true that their wide concern with all phases of evolution, with comparative physiology, with ecological factors, and indeed with practically every aspect of biology is a relatively recent development.

In spite of all that renewed activity, there has been no general book on zoological systematics. Such a book is now provided by the skilled hands of an ornithologist at the American Museum (author of *Systematics and the Origin of Species*) and two entomologists at the University of California. Stress