Upon request Professor Rosenberg kindly sent the writer seeds of his *C. "Reuteriana"* in 1921. These achenes were identical with those of *C. capillaris* (L.) Wallr. (= *C. virens*), and a large number of plants grown from this seed were all *C. capillaris*. The diploid chromosome number for *C. capillaris* is 6. Inasmuch as the normal diploid number for the plants designated by Rosenberg as *C. Reuteriana* is also 6 and plants grown from the same lot of seed were *C. capillaris,* there can be no doubt that *C. Reuteriana,* as used by Rosenberg, was a misnomer. The responsibility for this error seems to rest primarily with the Copenhagen Botanic Garden, whence Dr. Rosenberg obtained the material in question under the name, *Crepis Reuteriana.* As the determinations of this botanic garden are usually very accurate, Dr. Rosenberg assumed that the material in question was correctly labeled. This case illustrates how important it is that cytologists be very particular as to the identity of the material on which they publish. This is more apparent now than it was only a few years ago, on account of the bearing of recent cytologic, genetic and taxonomic research on phylogeny and evolution.

The chromosome number of *C. Reuteriana* has not yet been determined.

More recent references to Rosenberg's *C. "Reuteriana,"* for example by Heilborn,[3] and the probability that the true *C. Reuteriana* will figure in later investigations, make it desirable that this error in nomenclature be corrected without delay.

The writer has had the privilege of showing this note to Professor Rosenberg, who approves its publication.

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GERMANIC PSEUDO-SCIENCE

I DESIRE to comment very briefly on a pretentious looking publication received recently entitled, "Pflanzenverbreitung und Entwicklung der Kontinente." The author is Edgar Irmscher and the article, which runs to 235 pages and 33 figures, is published by the Institut für allgemeine Botanik, of Hamburg.

The author concludes that the present distribution and the past history of plants can best be explained by the so-called Wegener hypothesis of peripatetic continents and wandering poles. He displays the same ignorance of geological history as does Wegener, but it is not my purpose to waste space in an analysis of his conclusions, which, however, seem to me to be entirely contrary to the facts.

What is serious in its effect on the progress of science and on true scientific method is that a man can get publication for erroneous statements about which he knows nothing, as, for example (p. 70), that the core of Potosi Mountain in Bolivia is not rhyolite, but conglomerate, slate and tuff; that the Concepcion-Arauco flora of the coal measures of southern Chile is Pleistocene in age (p. 81), when actually it is interbedded and overlain with an extensive lower Miocene marine fauna; that the fossil flora from near Tumbez in northwestern Peru is Pliocene in age (p. 67), when it is interbedded with an extensive lower Miocene marine fauna that can be most conclusively correlated with the Miocene of Central America and the Antilles. Much more of a similar sort might be cited.

The fundamental basis for useful scientific speculation is that it shall explain observed facts, or at least that the speculator shall endeavor to substantiate his conclusions by facts of observation, not that facts of observation shall be misrepresented to fit the demands of a subjective hypothesis.

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[3] Heilborn, O., "Chromosome numbers and dimensions, species formation and phylogeny in the genus Carex." *Hereditas,* Vol. V, 1924, pp. 183–4.

SCIENTIFIC BOOKS

A Text-book of General Physiology for Colleges. By PHILIP H. MITCHELL. McGraw-Hill Book Co. 748 + xix pages.

TEACHERS of college physiology have for a number of years felt the need of a text-book suitable for elementary students, one which would present the more modern developments of the subject with less detail and from a more general point of view than any of the numerous existing works for medical students. Philip H. Mitchell's "Text-book of General Physiology" has been written to meet this need, and the cordial reception which it has received since its publication several months ago indicates that it is likely to fill successfully its intended place.

The book, in the words of its author, "is designed for use by college students who have studied introductory biology, chemistry and physics, but have not studied the organic and physical chemistry that seem prerequisite to the intelligent use of the advanced text-books of physiology and biochemistry which are now available." It is evident that there are several possible ways of attempting to meet the needs of this class of students. At the one extreme would be a text-book of "General Physiology" in the sense in which most readers of the *Journal of General Physiology* and of the writings of Bayliss understand this term. Such a book might use illustrations from the

physiology of man and the mammals where they were particularly appropriate, but would, for the most part, be concerned rather with general principles applicable to all forms of life than with the physiology of any single group of organisms. At the other extreme would be a text-book of human physiology of the usual sort. The author has chosen to avoid these two extremes and to follow a middle course by including as much as possible of both sides of the subject. This policy, while it has certain obvious advantages, has necessarily resulted in some loss of detail in the treatment of many individual topics.

Approximately the first third of the book is devoted to such subjects as: the food of plants and animals; proteins, fats and carbohydrates; the behavior of electrolytes; H and OH ions; vitamins; enzymes; and the physico-chemical structure of protoplasm. A considerable degree of condensation has been necessary to keep this part of the book within the limits assigned to it by the author. Thus, colloids are treated more or less incidentally under proteins, surface tension and cell permeability under fats, osmotic pressure under electrolytes, the rate of chemical reactions under H and OH ions, etc.

The remainder of the book gives a sufficiently complete account of human physiology to make it a suitable text for college students whose interests are primarily in this field. The chapter headings of this part of the book are: "Excitation and inhibition," "Physiology of contraction," "The functional units of nervous systems," "Reflexes," "The correlating action of the nervous system," "Receptors," "Digestion," "Chemistry of blood and lymph," "The circulation of the blood," "Respiration," "Physiological oxidations and heat regulation," "Excretion," "Protein metabolism," "Amounts of food required by animals," and "Internal secretions." In the treatment of these subjects, while the general point of view has not been entirely abandoned, the chief emphasis has been placed upon and most of the illustrative material drawn from the field of mammalian physiology.

The book is written in a clear and interesting style, and typographical errors are relatively few. It is perhaps inevitable that a work which covers such a wide field should in its first edition contain a number of statements which are either inaccurate or misleading. As examples, may be mentioned the following: "This coefficient for chemical reactions is always equal to or greater than 2 for an interval of 10°C." (p. 275), "another advantage of subdivision is the increase of surface tension thus obtained," etc. (p. 236); "This is further confirmed by the smallness of the part of the blood CO_2 which may be removed by the vacuum pump without adding acid to break down the bicarbonates of the blood" (p. 566). The author has also at times shown a certain carelessness in his use of physical terms, as, for example, on p. 140, where he speaks of a force of 22.4 atmospheres, and on p. 326, where the statement occurs that "this work is sufficient to raise a weight about nine times as great as that of its own body"—the distance through which the weight is lifted being unspecified. However, such defects as these can readily be eliminated, and they doubtless will be in the second edition which the work deserves and is likely to have. On the whole, the author is to be congratulated on having produced a book which will be of much assistance to teachers and students of college physiology as well as to general readers interested in this subject.

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RECENT CONTRIBUTIONS TO OUR KNOWLEDGE OF THE FOSSIL FISHES OF CALIFORNIA

THE present note is written for the purpose of calling attention to certain recent discoveries, by David Starr Jordan and associates, through which the remarkable fish faunas of the Miocene and other beds of California are being disclosed.

Dr. Jordan's earlier contributions[1] in this field (and also his two latest papers[2]) dealt largely with the teeth of sharks. A number of interesting fishes of other groups were, however, described. Among these may be mentioned a crossopterygian scale and a remarkable jaw-bone named *Xenesthes velox,* in which the outer surface seems to be covered with denticles, both assigned to the Triassic; a new type related to the pholidophorids, namely *Etringus,* and another new genus *Rogenio,* from the Soledad formation (probably pre-Miocene); a fossil *Gasterosteus,* and finally a series of Quaternary remains of a sturgeon, from the deposits of Potter Creek Cave, and of salmons and suckers from Oregon lake beds.

[1] Jordan, David Starr. "The fossil fishes of California with supplementary notes on other species of extinct fishes," Univ. Cal. Publ. Geol., 5, 1907, pp. 95–144, pls. 11, 12. "Note on a fossil stickleback fish from Nevada," Smiths. Misc. Publ., 52, 1908, p. 117. Jordan, David Starr, and Carl Hugh Beal. "Supplementary notes on fossil sharks," Univ. Cal. Publ. Geol., 7, 1913, pp. 243–256.

[2] Jordan, David Starr. "Some sharks' teeth from the California Pliocene," *Am. Jour. Sci.,* 3, 1922, pp. 338–342, figs. 1–3. Jordan, David Starr, and Harold Hannibal. "Fossil sharks and rays of the Pacific slope of North America," Bull. Sou. Cal. Acad. Sci., 22, 1923, pp. 27–68, many figures.