

plan for insect legs; that unlike the vertebrate, they occur on the thoracic region of the body; and that there may be other kinds of appendages. The statement that "Insects regularly have six legs" calls for a period or a great amen.

It seems to me that in nearly every case for which simplified phrasing has been suggested by the editor, the original scientific wording conveys a better and clearer idea as regards biological phenomena which, at best, are complex.

Recently after a first lecture to a group of freshmen on health topics a husky 17-year 6-footer approached me and said: "That was a pretty stiff lecture. I didn't understand all the big words."

I looked him over, made a judgment and replied. "That is one of your present problems. You have a text and there is an unabridged dictionary in the library. Go to work." He smiled and said "O.K." The next day he had the assignment.

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A Partial Reply

The editorial on "words" which appeared in the December issue called forth many responses. One of them, the only one that disagreed, is for that reason presented above. In view of the question whether accuracy isn't sacrificed when "front end" is substituted for the phrase "anterior portion of the body axis," perhaps further comment is desirable. The editor obviously did not make his point clear enough.

In the article in question, the writer was describing structures in and near the front end of the earthworm; no question of accuracy was involved. He actually meant "front end" rather than "anterior portion, etc." This is not to say that "front" is *always* a satisfactory substitute for "anterior." The writer who commented on the "complete immobility" had nothing about the

nature of insects or their protoplasm in his article—he only wanted to say that they were immobile on account of the cold and later in the article referred to them several times as frozen. There is no implication here that "frozen stiff" is *always* as good as "changed by subzero temperatures to complete immobility." And the man who said that "in the Insecta the regular number of thoracic walking appendages is six" was emphasizing the "six" as compared to the "eight" of spiders. The change does not suggest that the statement "insects regularly have six legs" would *in all cases* be as adequate as the longer statement.

All the editor was trying to say was that whenever a brief statement is as clear as a long one, the brief one is preferable. When for accuracy or clarity a longer statement is better, it should be used, of course. Sometimes "winter" is better; sometimes "season when average temperatures drop below the freezing point" is better. Only the context can determine which case is which—but when "winter" will do, why not use it?

Editors develop a word complex that is hard to describe. They encounter so many cases of redundancy and verbosity and so few of the opposite that they are always on the lookout for places to cut. No doubt most of them at times want to cut too deep.

Reviews

SARTON, GEORGE. *The Life of Science; Essays in the History of Civilization.* Henry Schuman, New York. vii + 197 pp. 1948. \$3.00.

This little book is a collection of essays written over a period of thirty years by a Professor of the History of Science in Harvard University. The book has been prepared for the general reader. Much of it is within the range of interest and comprehension of high school students. The author's aim is to introduce the reader to the history of science, its scope, purpose, and methods. The topics chosen lean heavily on the physical sciences and mathematics, although there are numerous cases cited from the biological sciences. The titles of the essays follow:

The Spread of Understanding; The History of Medicine Versus the History of Art;

The History of Science; Secret History; Leonardo and the Birth of Modern Science; Evariste Galois; Ernest Renan; Herbert Spencer; East and west in the History of Science; An Institute for the History of Science and Civilization; Casting Bread upon the Face of the Waters.

There is an index.

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DUNCAN, WINIFRED. *Webs in the Wind*.

Ronald Press, New York. xv + 387 pp. illus. 1949. \$4.50.

"A spider's face is pretty awful until you get fond of it," says Winifred Duncan, who is evidently quite fond of awful faces. "It has long been my intention," she says, "to select some little creature concerning which I knew nothing, make a careful study of its life, and write a book about it which would take the reader along with me, step by step, on a voyage of discovery. That's where the magic is, the shock of delight and incredulity, the fun of finding things out, of making mistakes, of blundering on fascinating secrets." Abundantly illustrated with sketches, the journal-narrative traces two years' work on web-weavers. It is occasionally anthropomorphic, but the observations are provocative for both the casual hobbyist and serious researcher in animal behavior.

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WILLIAMS, R. O. *School Gardening in the Tropics*. 3rd ed. Longmans, Green and Company, London. 143 pp. 1949. 3/-.

Mr. Williams, formerly Director of Agriculture in Zanzibar, compiled this book from a revision of material given in lectures for teachers in Trinidad in 1921. The book is small and paper-bound, illustrated with small drawings, and contains an appendix with a list of the common and scientific names of plants useful in tropical school gardens. Some of the topics discussed include: The object of a school garden, experimentation in plant production, how to relate gardening to other school work, as well as practical sug-

gestions about cultivation and fertilization of the soil, selection of plants, planning the garden, care of plants, plant pests and diseases with suggestions for eradication, and hints about how to deal with land of different physiographic natures.

The tropical nature of the material necessarily limits its specific application in the United States, but the book is of interest as an example of what may be accomplished with garden project work, especially in the more rural communities. It may also serve as an impetus for those who might be qualified to assemble a similar compilation for teachers of temperate climates.

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RENT-FREE VACATIONS

An opportunity to enjoy a rent-free vacation in any region of the United States is currently being offered to members of the teaching profession by the Teachers Residence Exchange. School and college instructors who register with the exchange are assisted in locating similarly-situated colleagues who wish to exchange homes for the summer or during a sabbatical leave. Officials of this unique service report keen interest among educators all over the country. California, New York, the southwest, and New England are the sections most popular with teachers seeking rent-free vacations, according to Mrs. Mildred Lewis, director of the residence exchange.

"Teachers wish to live in neighborly friendliness and are glad to really get to know the people and the way of life of the region they choose for their vacation," stated Mrs. Lewis. "Exchanges are made on the basis of complete information supplied by registrants," she added, "so that each teacher family finds a home very much like their own waiting to welcome them." Teachers interested in further information about the rent-free vacation plan should write to the *Teachers Residence Exchange*, 100 West 42nd Street, New York 18.