The habits of mosquitoes, adults and young, are treated in 50 pages, followed by a detailed account of their natural enemies. This last topic is evidently capable of great extension, and it is evident that any intelligent amateur can readily add to what is known by observations in his own locality. The relation of mosquitoes to man occupies about 260 pages, covering both theoretical and practical aspects. The very clear and well written, but not in the least sensational, accounts of the discovery of the connection between mosquitoes and malaria and yellow fever ought to be reprinted and distributed broadcast over the country. Some bulletins of the Department of Agriculture give useful practical information about mosquitoes and disease, and there are various other more or less accessible publications dealing with these matters; but would it not be a good thing if the plain, unvarnished, historical account of the work of Manson, Ross, Grassi, Finlay, Reed, Carroll and Lazear (and we should like to add portraits of these men) could be sent, in the form of a pamphlet, to every school in North America? We offer the suggestion to Mr. Carnegie. To this account might be added the words of the authors, who after describing brilliant anti-malarial work in foreign countries, are obliged to say: "In the United States, it is sad to relate, almost nothing has been done in the way of an active campaign against malaria alone, even in restricted localities. It is true that extensive work has been done against mosquitoes, but in the most of these cases the incentive does not seem to have been to better the health of the people or to stamp out malaria." The volume ends with a bibliography and a very complete index.

The second volume contains 150 beautiful plates, illustrating the structural characters of the eggs, larvæ, pupæ and adults. In a work otherwise characterized by such conscientious crediting of all assistance, it is surprising to see no reference to the artist or artists of the plates; doubtless this information will be given in the next volume.[1] We note that in the names of species, no attempt is made to alter the terminations of adjectival specific names to make them agree in gender with the names of the genera to which they are referred.

T. D. A. Cockerell
University of Colorado

Trees in Winter: their Study, Planting, Care and Identification. By Albert Francis Blakeslee, Ph.D., Professor of Botany and Director of Summer School, Connecticut Agricultural College, and Chester Deacon Jarvis, Ph.D., Horticulturist, Storrs Experiment Station. Illustrated Octavo, 446 pp. New York, The Macmillan Company. 1913.

About a year ago the writer of this review had the pleasure of making a short notice[1] of Bulletin 69 of the Storrs Agricultural Experiment Station, entitled "New England Trees in Winter" by the authors of the work now under consideration. Then we said "We do not recall any better treatment of our trees than is to be found in this publication." Further use of the bulletin confirms the favorable impression made on its first appearance. We have now a very considerable enlargement and revision of the bulletin in the form of the stout volume whose name appears at the head of this review. In revising the earlier publication the authors have introduced chapters on the structure, life and growth of trees, their propagation, tree planting in the country and the city, how to plant, care, common injuries, control of parasites, insecticides, etc. In these chapters the authors have managed to condense a great deal of valuable information for the general reader, and especially for the owner of a piece of ground on which trees are now growing, or on which the owner wishes to plant trees. Nor do they present the growing of trees merely from the standpoint of utility, although that is sufficiently empha-

[1] I have since learned that the drawings of whole larvæ and the detail drawings of larvæ (plates 86–131) are by Mr. Knab, part of the latter inked in by Miss Mary Carmody. The male genitalia are drawn by Miss Carmody; the eggs (plates 146–147) are by Miss E. G. Mitchell. The photograph of *Anopheles* wings is by Mr. H. S. Barber.

[1] Science, March 22, 1912.

sized. We like the opening sentences in Chapter III., and can not refrain from quoting some of them, as follows:

Every citizen in every country is interested, or should be interested, in good scenery. Of the various elements that constitute good scenery or that go to make up our landscape there are none so ornamental nor so indispensable as trees.

In discussions relating to the conservation of our natural resources, therefore, the element of good scenery should always be considered. Since good forests, good farms and good waterways contribute largely to the landscape, the element of good scenery can not easily be separated from many of the commonly recognized natural resources.

Trees have become so much a part of our civilization that it would seem almost impossible to get along without them. What would our homes, our country roads, our city streets, our parks, and our landscape be without them? We all know that trees are beautiful and even necessary in such places, but we can not fully appreciate their value till we have seen the desert.

The value of trees from the economic or commercial standpoint is well understood and can be estimated on the basis of dollars and cents. Their esthetic value and their value from the standpoint of health is not so generally appreciated nor is it so amenable to calculation. We hear a great deal these days about surveys—forest surveys, agricultural surveys and the like. A survey in this sense means an inventory or a stock-taking. It would be interesting to make a survey based upon the landscape wealth of any section or of the whole country. It would be interesting also to compare in such a survey the relative value of the various elements of the landscape. It seems safe to predict that in most sections trees would be credited with a very large proportion of the total wealth.

And again in Chapter IV., we find these suggestive sentences:

When we think of the open country we are reminded of the cool and shady roads, although some country roads are not so alluring as they ought to be. The thought is comforting. On the other hand, when we think of conditions in the city, the hot and dazzling pavements present themselves vividly to our memory. The thought is anything but comforting. Blessed is the city that is well supplied with trees.

The attractiveness of a city depends largely upon its trees. A city without trees can not be attractive, and the more trees within the city limits, the more attractive is the city likely to be.

Passing to the systematic part of the book there is first a general chapter on the identification of trees, with such explanation of terms as will render this work easier for the beginner. Then follow various keys, as (1) a key to genera, (2) keys to the conifers, (3) keys to the various kinds of deciduous trees. These keys refer to full-page descriptions and discussions of the particular species, and on the opposite page is a full-page plate of characteristic illustrations made by "half-tone" process from carefully selected photographs. These descriptions cover habit, bark, twigs, leaves (in evergreens only), buds, fruit, comparisons with other species, distribution, and wood characters. Preceding the descriptive matter is an English name, followed by the scientific name, very properly in a book like this, accompanied by the "authority" for the species. A convenient glossary and a well arranged index complete this useful book. The binders have enclosed the text in a pretty and appropriate cover in keeping with its title.

CHARLES E. BESSEY
THE UNIVERSITY OF NEBRASKA

Science and the Human Mind, a Critical and Historical Account of the Development of Natural Knowledge. By WILLIAM CECIL DAMPIER WHETHAM, M.A., F.R.S., Fellow and Tutor of Trinity College, Cambridge, and CATHERINE DURNING WHETHAM, his wife. New York, Longmans, Green, and Co. 1912. Pp. xii + 304. Price, $1.60 net.

This work consists of an Introduction, and of six chapters on Science in the Ancient World, the Medieval Mind, the Renaissance and its Achievement, the Physics of the Nineteenth Century, the Coming of Evolution, and the Last Stage; of a good bibliography (pp. 287–296), and of a full index. The authors are already known favorably to scientific men by their "A Treatise on the Theory of Solution" and "The Theory of Experimental Electricity"; to the general public by their admirable "The Recent Advance of Physical