OUR BOOK SHELF.

The House-fly, Musca domestica, Linnaeus: a Study of its Structure, Development, Bionomics, and Economy. By Dr. C. Gordon Hewitt. Pp. xiv+196+10 plates. (Manchester: University Press, 1910.) Price 20*s.* net.

In this volume the student will find, in a convenient form, the three valuable papers on the common house-fly which Dr. Hewitt contributed to the *Quarterly Journal of Microscopical Science* in 1907, 1908, and 1909. In the first the author deals with the anatomy of the fly, in the second with the habits, development, and anatomy of the larva, and in the third with the bionomics, allies, and parasites of the insect, and its relations with human disease. The volume opens with a brief introduction, and concludes with three short appendices, comprising some facts ascertained since the issue of the original papers.

The first part is noteworthy for a full and original description of the tracheal system of the fly. In his account of the proboscis, Dr. Hewitt agrees with most recent students of the jaws of Diptera in regarding the palps as maxillary and the sucking organ as labial; in this, as in some other interpretations, he differs from the opinions expressed in Lowne's well-known work on the blow-fly. In the second part, especial attention has been paid to the muscular system of the larva, which is described and figured in detail. The rate of development is very rapid, and there are only three larval instars. While horse-dung is the most usual food of the house-fly maggot, the female fly may lay her eggs in a wide variety of unclean and decaying animal and vegetable substances, in any of which the larvæ can be successfully reared. Hence it follows that house-flies must frequently carry disease germs which they have abundant opportunity of introducing into human food, and the name "typhoid fly," which some American entomologists are trying to affix to *Musca domestica*, might be justified from certain unpleasant but instructive records which Dr. Hewitt quotes of the proximity of typhoid-infected privies to dairies.

The hygienic bearing of the insect's relations with mankind is seriously and temperately discussed by the author, who pleads for such protection or destruction of substances in which the eggs are laid as may effectually reduce the numbers of the species, and for the covering of food substances, like milk and sugar, on which the flies habitually alight. The book affords an excellent illustration of the amount of original and useful work that may be done on the commonest and best known of animals. G. H. C.

The Science of Happiness. By Dr. H. S. Williams. Pp. vi+350. (London and New York: Harper and Brothers, n.d.) Price 7*s.* 6*d.* net.

This might well be given the still wider title of "The Art of Living," for it concerns itself with human activity of all kinds. It is a pleasantly written series of papers on such topics as how to eat, how to sleep, how to think, and even how to die, and, though a trifle diffuse and flat—revealing the fluent writer with not much that is original to say—it contains much wisdom of an everyday kind, and many apt quotations to spice up the text.

Dr. Williams is not a food faddist, and almost his only criticism on this head is that most of us eat too much. But he would not cut down the number of meals to anything below three per day, for he believes that, on the whole, experience endorses that number. He condemns alcohol, tobacco, and—less vehemently—tea and coffee. Exercise ought to be gentle and regular, and we may sleep eight hours per night if we want to, but must not doze off for another forty winks after a good night's rest. An interesting point is that Dr. Williams believes the stunted growth of the Latin races to be the result of the habit of wine-drinking.

As to the mind, the author counsels the strenuous life, as befits a good American, and stimulative examples are quoted. Mezzofanti learned fifty-seven languages. Pliny (the elder) never left off studying except when asleep or in his bath, and after the latter he had a book read to him while he was being rubbed dry. As to opinions, religious or political, think them out for yourself. Ask yourself why you believe this or that. Do not be content to inherit opinion as you inherit the colour of hair or eyes. Work your way to rational conviction.

It is all very chatty, pleasant and sensible; and we do not mean any cheap satire when we say that the book is beautifully bound and produced.

Rinaldo's Polygeneric Theory: a Treatise on the Beginning and End of Life. By Joel Rinaldo. Pp. 123. (New York: 206 West 41st Street.)

To Mr. Rinaldo, "evolution" is like the red rag to the proverbial bull; and, like most violently biased people, he has not given sufficient study to the object of his attack. For example, in arguing for the special creation of man, he says it is "ridiculous" to explain by migration the similarities found in widely separated countries. But evidently he does not realise the length of duration in past time of a being justifiably called man, for, even if we assume that duration to go back no further than the Miocene period, there is ample scope for almost unlimited migration (*e.g.* there was land at this period probably across the North Atlantic); and, indeed, human migration is not essential to the theory; migration of lower animal forms, in still more remote periods, would do nearly as well. Mr. Rinaldo seems to think that evolution implies an Adam and Eve from whom all mankind are descended. As a matter of fact, the theory of biological evolution would not be invalidated if it were proved that man appeared on various parts of the earth's surface at the same time, for these primitive human beings would be descended from other and less complex forms of life—animals of anthropoid but not yet human structure.

Mr. Rinaldo, though an amateur, is well read in some directions, but he has not studied Darwin and Huxley thoroughly, not to mention more recent biologists, and his judgment is warped, like Carlyle's, by mistaken notions of the "monkey damnification of man." The wish being father to the thought, he asserts that "Darwinism is already dead." If he will read a book reviewed in Nature, July 14, he will see that one of our greatest authorities—Sir E. Ray Lankester—thinks it is still very much alive. But we hardly expect that he will be converted.

Letters from High Latitudes, being Some Account of a Voyage in 1856 in the Schooner-Yacht "Foam" to Iceland, Jan Mayen, and Spitzbergen. By Lord Dufferin. With an introduction by Dr. R. W. Macan. Pp. xxxvi+261. (London: Henry Frowde, Oxford University Press, 1910.) Price 1*s.* net.

These entertaining letters were first published in 1856, and are so well known that any words of praise are unnecessary. The master of University College, Oxford, in his introduction, says:—"The letters are, or ought to be, a *World's Classic*; Mr. Frowde's happy enterprise has made that concept a reality." It may be noted that the volume is the hundred and fifty-eighth to be added to the series of "The World's Classics."