MANLEY

## PAR JEAN-HENRI FABRE

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BENJ. H. SANBORN & CO.
CHICAGO NEW YORK BOSTON

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Norwood Press
J. S. Cushing Co. — Berwick & Smith Co.
Norwood, Mass., U.S.A.

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# JAMES E. ARMSTRONG PIONEER IN THE TEACHING OF SCIENCE

#### PREFACE

Most of the French literature available for reading in classes is in the form of comedies or love stories. There are perfectly obvious reasons why it is desirable to vary this diet and give classes French to read which shows other sides of the national genius. These reasons furnish sufficient justification for this book.

Fabre's Les Ravageurs has qualities which make it good reading for classes rather early in their course—at least as early as the second year. It is decidedly easier than the usually read novels and plays. The French is simple in its structure and popular in its style, the vocabulary is small and words are repeated. There is only the smallest possible body of technical terms, as Fabre wrote this book for readers not versed in the subject which he presents.

In Les Ravageurs Fabre gives us some insight into entomology. The subject-matter which he presents is interesting and valuable, and its value is not for a day but for all time. Whether we like the study of insects or not, it is our duty, and may be our pleasure, to inform ourselves about them.

In this book the usual notes and vocabulary have been added. Fortunately, there has been but little occasion for notes. Fabre's French is good material on which to base easy, practical exercises. For those who are too busy to prepare their own, a series of such exercises has been provided at the end of the book.

It may not be out of place to inform the reader that this edition of *Les Ravageurs* is published with consent and approval of Fabre's publishers in Paris, and on their own terms.

### JEAN-HENRI FABRE

Jean-Henri Fabre was born in 1823. He is popularly known as a scientist or naturalist. Properly he was an entomologist. In his earlier years he was interested in all branches of science. At the age of thirty he turned to entomology, devoting to the study of insects all the time he could. From that time on he worked exclusively in this field, with unparalleled enthusiasm and persistence. The results of his labors and investigations are printed in eleven large volumes under the forbidding title of *Souvenirs Entomologiques*. He published in all about eighty books on scientific and related subjects. His life was spent almost entirely in southeastern France.

Fabre's ability was unusual. He could learn anything, he could do anything. Those who read his books are brought into contact with one of the most scholarly and accurate minds that ever graced the vast field of learning.

Fabre was a born teacher, a truly great scientist, a pioneer in entomology, and a master of French style. Poverty followed him all the days of his life. It was his misfortune not to be an advertiser. He died in 1915.

The following biographical sketch of Fabre by Marmaduke Langdale was published in London *Daily Mail* in 1912:

"The story of the old man's life is the story of ninety years of struggle and makeshift and perseverance. Scattered here and there through the ten volumes of the Souvenirs Entomologiques are sketches of autobiography in which with charming simplicity he tells us of his humble birth and home, his illiterate parents, the rough and ready Provencal school where he picked up reading and writing in the intervals of assisting the schoolmaster in his garden. Next came two years at the college of Rodez, where he paid for his education by singing in the church choir. Domestic calamity followed, and the boy had to leave his studies and set to work to help support the family. Later we find him at the normal school of Vaucluse, and eventually he himself becomes a schoolmaster, first at Ajaccio in Corsica, afterward at Avignon, in his native Provence; but is compelled to relinquish all hope of achieving a university professorship because, as a friend points out to him, 'the salary is inadequate to keep up the position.'

"Meanwhile the scientist in Fabre had begun to develop. He was barely five years old when he first tried to discover how the cicada produces its chirping sound, and all through his boyhood he was prying into Nature's secrets and observing the ways of insect and bird. A chance meeting at Ajaccio with Moquin-Tandon, the botanist, led to his throwing himself into natural history with heart and soul. 'Leave your mathematics,' said the savant, 'and get to the beast.' Fabre got to the beast and stuck to the beast; but it

was the insect above all that attracted him, and through seventy years of poverty and drudgery he persevered, noting, observing, comparing the doings of the world of tiny things.

"He at length found time to publish the first two volumes of his famous Souvenirs Entomologiques and began to make his name as an entomologist of the highest order. His researches outside the beaten track called Darwin's attention to him. A correspondence was started between the two; and at the English scientist's request the young man undertook a number of experiments in order to discover the means by which birds and insects find their way home to the nest from a distance. It was some years before Fabre was able to complete his experiments; and by that time Charles Darwin was dead.

"At one time Fabre seemed within reach of a fortune or at least a competence. It was when he was professor at the Lycée at Avignon. He was already married, with a growing family. Money was more than ever necessary to him; and in order to make it he devoted himself to chemical research. One of the chief products of the Avignon district was the madder root, which was grown to supply the local dye works; and Fabre's predecessor had dabbled, not without success, in experiments for improving the process of extraction. Fabre continued the work in the modest laboratory; he was noticed by Victor Duruy, the minister of education; he refused financial assistance and had received [the decoration of] the Legion of Honor; and he had arranged for building the factory to exploit his perfected process when the discovery of artificial alizaline put an end to all his hopes.

"In the course of time there came an increased demand for his books, and after moving from Avignon to Orange and from Orange to Sérignan he was able to realize the dream of his life — to possess a little house of his own surrounded by a garden and the adjoining bit of waste land, his harmas, where he could prosecute at leisure his researches on his beloved insects.

"His books include volumes on astronomy, botany, geology, on domestic animals, on animals beneficial to agriculture and on agricultural pests, in addition to the famous *Souvenirs Entomologiques*.

"Fabre is a true naturalist. His books are not dry biological treatises filled with what he himself calls 'barbarous technicalities and scientific names.' They are living documents crammed with quaint conceits and delicate touches of humor. The inside of an insect leaves him unmoved, but his whole life has been devoted to the observation of its habits, its instincts, and its methods of self-preservation. And he is more than a naturalist, he is a preëminent man of letters, or, to quote Maurice Maeterlinck, he is 'one of the most profound and inventive scholars and also one of the purest writers, and, I was going to add, one of the finest poets of the century that is just past.' His style is limpid and exquisite and charming, and every line that he has written radiates sincerity and kindness. He tilts with Darwin and the Theorists, but never fiercely or harshly; he is the first to make amends if ever he is guilty of an unconscious injustice, even to the dead; he loves man and he loves the animals; and above all he loves the wasp, the bee, the beetle, with a love that approaches that of Saint Francis of Assisi for 'his little brothers the birds.'"

#### THE INSECTS' HOMER

#### By Maurice Maeterlinck

(Extracts from an article in the Forum of September, 1910)

Fame is often forgetful, negligent, behindhand, or unjust; and the crowd scarcely knows the name of Jean-Henri Fabre, who is one of the most profound and inventive scholars and also one of the purest writers, and, I was going to add, one of the finest poets of the century that is just past.

Fabre, as some few people know, is the author of half a score of well-filled volumes in which, under the title of *Sowenirs Entomologiques*, he has set down the results of fifty years of observation, study, and experiment on the insects that seem to us the best-known and familiar: different species of wasps and wild bees, a few gnats, flies, beetles, and caterpillars; in a word, all those vague, unconscious, rudimentary, and almost, nameless little lives which surround us.

We take up one of the bulky volumes and naturally expect to find first of all one of the very learned and dry lists of names, the fastidious and quaint specifications of those huge dusty graveyards of which all entomological treatises that we have read so far seem to consist. We open the book without zest and with no unreasonable expectations. Forthwith, from between the open leaves, there rises and unfolds itself almost without remission to the end of the 4000 pages the most extraordinary of tragic fairy-plays that it is possible for the imagination, not to create or conceive, but to admit and acclimatize within itself.

Fabre is indeed the revealer of this new world, for, strange as the admission may seem at a time when we think we know all that surrounds us, most of those insects minutely described in the vocabularies, learnedly classified and barbarously baptized, had hardly ever been observed in real life or questioned to the end in all the phases of their belief and deceptive appearances. He has devoted to surprising their little secrets fifty years of a solitary existence, misunderstood, poor, often very near penury, but illumined every day by the joy which a truth brings, which is the greatest of all human joys. Petty truths, you may say, those presented by the habits of a spider or a grasshopper. There are no petty truths nowadays; there is but one truth, whose mirror seems broken to our uncertain eyes, though its every fragment, whether reflecting the revolution of a planet or the flight of a bee, contains the supreme law.

To make of these long annals the generous and delightful masterpiece that they are and not the arid and monotonous register of little descriptions and insignificant acts that they threatened to be, required various and conflicting gifts. To the patience, the precision, the scientific minuteness, the protean and practical ingenuity, the energy of a Darwin in the face of the unknown, to the faculty of expressing what has to be expressed with order, certainty, and clearness, the venerable anchorite of Sérignan adds many of those qualities which cannot be acquired, certain of those innate good poetic virtues which cause his sure and supple prose, devoid of artificial ornament and yet adorned with simple and spontaneous charms, to take its place with the excellent and durable prose of the day—prose of the kind that has its own atmosphere, in which we breathe gratefully and tranquilly and which we find only around great works.

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#### LE LILAS CASSÉ

Pendant la nuit, il s'était levé un grand vent qui sifflait dans les trous des serrures et grondait dans le canal de la cheminée; quelques volets battaient contre le mur. Jules s'éveilla. Il dormait cependant du calme sommeil du jeune âge, mais un fâcheux pressenti-5 ment vint peut-être en rêve lui traverser l'esprit. écouta: il entendit dans le jardin de l'oncle un bruit de feuillage froissé. « Ah! mes pois de senteur, se disait-il à lui-même, mes pauvres pois de senteur, en quel état vous trouverai-je demain! La ramée qui vous soutient 10 sera couchée à terre. Ah! mon pauvre petit jardin!» Il lui fut impossible de se rendormir. Plus jeune que lui de quelques années, Émile n'entendit rien de ce qui se passait dehors. Laissons-le dormir jusqu'à ce qu'un rayon de soleil vienne caresser ses joues roses, et disons 15 un mot des gens de la maison.

L'oncle Paul est bien dans le village celui de tous qui sait le mieux conduire un jardin. Quand le temps des cerises est venu, on s'arrête émerveillé devant sa rangée de cerisiers, dont les branches luisantes fléchissent sous 20 la charge des fruits. Puis il y a des poires plus grosses