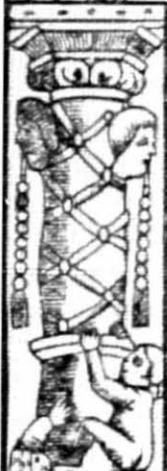


THE FLEA

HAROLD RUSSELL



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THE FLEA

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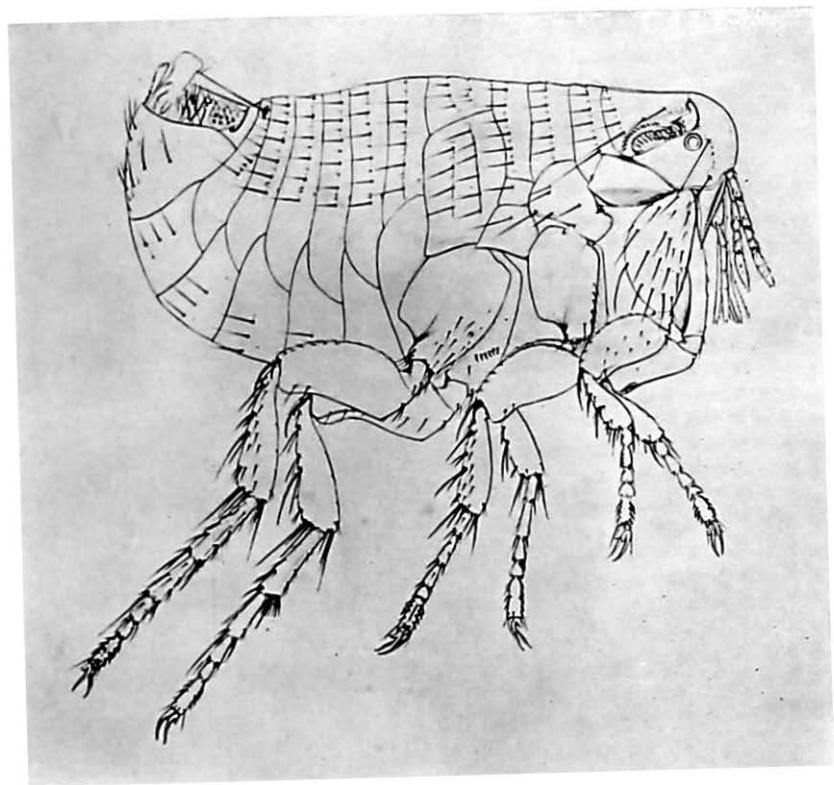
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After a drawing by Dr Jordan

Oriental rat-flea (*Xenopsylla cheopis* Rothsch.). Male:

The book cover features a highly decorative border. At the top, two winged cherubs (putti) are shown in profile, one on the left and one on the right, holding a scroll. Below them is a semi-circular archway containing a fan-like motif. The central text is enclosed in a rectangular frame. On the left and right sides of this frame are vertical panels, each containing a classical column capital. The columns are intricately decorated with figures and patterns. At the bottom of the frame, two winged cherubs are depicted holding up a large shield. The shield is divided into four quadrants, each containing a different heraldic symbol: a lion, a castle tower, a lion, and a castle tower. The entire border is rendered in a detailed, engraved style.

THE FLEA

BY
HAROLD RUSSELL,
B.A., F.Z.S., M.B.O.U.

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PREFACE

THE aim of this book is to give in plain language some account of a small, but noteworthy, group of insects. I have avoided, whenever I could, using the technical terms of zoology. To avoid doing so entirely is impossible in a book which describes insects in some detail. No technical term has, I hope, been used without an explanation.

Over thirty years have elapsed since Taschenberg's German book, *Die Flöhe*, appeared. Our knowledge has made enormous strides since then. More species of flea are now known from the British Islands alone than were then known from the whole world. So far as I am aware, no book, devoted to what is known about fleas, has ever been published in English. The statements about these insects in the general text-books of entomology are frequently antiquated and inaccurate. But there is a fairly extensive literature on the *Siphonaptera* scattered through scientific periodicals mostly in English, German, Italian, Dutch and Russian. I have given some references in the Bibliography.

The naturalists now living who have devoted any time to the special study of fleas may almost be counted on one's fingers. In England there are Mr Charles Rothschild and Dr Jordan; in the Shetland Islands, the Rev. James Waterston; in Germany, Taschenberg of Halle and Dampf of Königsberg; in Russia, Wagner of Kieff; in Holland, Oudemans of Arnhem; in Italy, Tiraboschi of Rome; in the United States, Carl Baker and a few others. I have not mentioned medical men who have investigated fleas in connection with plague.

There are small collections of fleas in the Natural History Museums at South Kensington (London), Paris, Berlin, Königsberg, Vienna, Budapest, S. Petersburg and Washington. Of private collections Mr Charles Rothschild's at Tring is by far the best in the world. It contains something like a hundred thousand specimens and is most admirably kept. I must express profound and sincere gratitude to Mr Rothschild for having helped me in numberless ways and advised me in many difficulties.

It is well known that the mere mention of fleas is not only considered a subject for merriment, but in some people produces, by subjective suggestion, violent irritation of the skin. The scientific study of fleas has, however, received a great impetus since it has been ascertained that they are the active agents

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in spreading plague. Rat-fleas are of various kinds, and not all fleas will bite man. A knowledge of the different species has suddenly become useful. The humble, but ridiculous, systematist with his glass tubes of alcohol for collecting fleas, his microscopic distinctions, and Latin nomenclature has become a benefactor of humanity. Some people seem to be practically immune to the bites of fleas, but even to such persons their visits are unwelcome. A famous Frenchwoman once declared : "*Quant à moi ce n'est pas la morsure, c'est la promenade.*"

H. R.

LONDON,

September, 1913.

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