

**MOSQUITOS AND MALARIA: A
SUMMARY OF KNOWLEDGE ON
THE SUBJECT UP TO DATE, WITH
AN ACCOUNT OF THE NATURAL
HISTORY OF SOME MOSQUITOS**

Published @ 2017 Trieste Publishing Pty Ltd

ISBN 9780649437719

Mosquitos and Malaria: A Summary of Knowledge on the Subject Up to Date, with an Account of the Natural History of Some Mosquitos by Cuthbert Christy

Except for use in any review, the reproduction or utilisation of this work in whole or in part in any form by any electronic, mechanical or other means, now known or hereafter invented, including xerography, photocopying and recording, or in any information storage or retrieval system, is forbidden without the permission of the publisher, Trieste Publishing Pty Ltd, PO Box 1576 Collingwood, Victoria 3066 Australia.

All rights reserved.

Edited by Trieste Publishing Pty Ltd.
Cover @ 2017

This book is sold subject to the condition that it shall not, by way of trade or otherwise, be lent, re-sold, hired out, or otherwise circulated without the publisher's prior consent in any form or binding or cover other than that in which it is published and without a similar condition including this condition being imposed on the subsequent purchaser.

www.triestepublishing.com

CUTHBERT CHRISTY

**MOSQUITOS AND MALARIA: A
SUMMARY OF KNOWLEDGE ON
THE SUBJECT UP TO DATE, WITH
AN ACCOUNT OF THE NATURAL
HISTORY OF SOME MOSQUITOS**

MOSQUITOS AND MALARIA.

HADMAN, CHERRY AND SELL, LTD.
PRINTERS,
MAYON WORKS, 112-114, PARADISE ROAD,
AND 20-22, ST. SAUND STREET, S.E.

K-RC 116

C5

Biol.

Lib.

to

W. M. HAFFKINE, ESQ., C.I.E., D.SC.,

Director-in-Chief of the Government Plague Research Laboratory, Bombay:

A TRIBUTE OF RESPECT AND ADMIRATION

FOR ONE WHO HAS, BY THE LABOUR OF YEARS,

BEEN THE MEANS OF ROBBING

TWO OF THE MOST DEADLY OF TROPICAL DISEASES

OF HALF THEIR TERRORS

BY HIS DISCOVERY OF VACCINES FOR

CHOLERA AND PLAGUE.

M375285

PREFACE.

THE subject of the connection between the prevalence of Mosquitos and the prevalence of Malaria, discussed in the following pages, must come to be regarded, when more fully understood, as of the utmost importance over the greater portion of the earth's surface. Already, in some countries (especially Italy and India), it has attracted a very great deal of attention.

The literature of the subject has, however, been scattered hitherto so widely through so many medical journals and official reports that it has been difficult for anyone to acquire, without a good deal of study and research, a clear knowledge of what has already been ascertained in reference to the matter.

The object of the present work is to supply, in the form of a small cheap handbook, a concise and convenient summary of knowledge on the subject to date.

Written originally for use in India only, and published in Bombay, the work has now been revised so as to render it suitable for a wider circulation.

I regret that I have not been able, owing to my having been transferred to other duties, to treat the ætiology of malaria, from a mosquito stand-point, as fully as I intended; but I venture to hope, nevertheless, that the work (the materials for which have been gathered under some difficulties, during intervals between my official duties), may be of service, as it stands, to many

who are interested in Mosquitos and Malaria, but have not the time or the opportunities for referring to the many publications (British, American, and Italian) on the subject.

There are many points connected with the subject which still remain doubtful and require further study; and, before any really useful rules can be formulated for the destruction of the various species of mosquitos which are now known to be capable of communicating malarial fever to man, the details of their biology must be much more fully worked out. One of the first things to be aimed at is the drawing up of maps showing the geographical distribution of those species throughout the world.

So far as India is concerned, I have the permission of Mr. Haffkine to say that any specimens of mosquitos, larvæ, etc., sent for examination to the Plague Research Laboratory, Bombay, and marked "Mosquitos," will be attended to, in the event of my absence, by the staff of the Laboratory; and that the receipt of all specimens, notes of occurrences, or other information bearing upon the subject, will be duly registered in a book kept for the purpose. The record compiled from this book will be ultimately published.

Mosquitos can be conveniently sent for identification in small boxes or bottles, or compressed between folds of dry blotting paper. Cotton wool should not be used. The larvæ should be sent in a 2½ per cent. solution of formalin, but glycerine and water, boric-acid solution, or weak

alcohol will do almost equally well ; or the larvæ may be sent alive in a corked tube containing some of the water in which they have lived, if sufficient air is allowed them.

Small glass tubes, $1\frac{1}{2}$ inches long, fitted with corks, and carried in a small box, tin case, or larger tube, are most useful for carrying home specimens or sending them by post.

I am much indebted to Major Ross, D.P.H., M.R.C.S., for having kindly communicated to me some valuable information, of which I have made use.

I have also to thank my brother, Mr. Miller Christy, F.L.S., of Chelmsford, and Mr. E. Bertram Smith, of St. Bartholomew's Hospital, who have been good enough to see the work through the press during my absence from England.

If this little work should be the means of interesting fresh observers, thereby inducing them to add to our knowledge of the subject discussed, I shall feel amply repaid for the labour of preparing it.

As knowledge on the subject is advancing very rapidly, I hope that it may be possible to issue, from time to time, further editions, brought up to date.

CUTHBERT CHRISTY.

BOMBAY,
April 1900.

LIST OF PLATES.

	FACING PAGE.
CHART SHOWING RELATION OF THE PREVALENCE OF MALARIA TO RAINFALL AND RISE OF WATER IN SOIL	50
PLATE I.—HEAD OF CULEX, MALE AND FEMALE (MAGNIFIED)	68
PLATE II.—CULEX: ITS ATTITUDES WHEN AT REST, ITS EGGS, AND ITS NYMPHÆ	70
PLATE III.—HEAD OF ANOPHELES, MALE AND FEMALE (MAGNIFIED)	72
PLATE IV.—ANOPHELES: ITS ATTITUDES WHEN AT REST, ITS EGGS, AND ITS NYMPHÆ	74
PLATE V.—LARVÆ OF CULEX AND ANOPHELES, FROM VARIOUS POINTS OF VIEW	76